

HISTORY OF THE SECOND WORLD WAR

published in 96 weekly parts PART 4

95c



**GLIDER STRIKE
ON WORLD'S
STRONGEST FORT**

**THE BALANCE OF
ARMS ASSESSED**

**HITLER'S TROOPS
CRUSH NORWAY**





© BPC Publishing Ltd:
First Edition 1966
Second Edition 1972
© Marshall Cavendish USA Ltd 1973
Canadian On Sale Date: May 3, 1973

THIS WEEK'S CONTENTS:

- 85 **Conquest of Norway** *Major-General J. L. Moulton*
- 95 **Military Balance** *Major-General R. H. Barry*
- 106 **Coup from the Air: the Capture of Fort Eben-Emael** *Oberst Rudolf Witzig*
- 112 **Churchill Takes Over**

NEXT WEEK:

The story of the war is moving into a crucial phase. Our next issue will describe the fall of Holland and Belgium and the breakthrough to Sedan. Although the low countries had good reasons for suspecting that they were included in the Nazi plan of conquest — they still clung to the hope that somehow their neutrality would protect them. But geography had placed them squarely in the Wehrmacht's path

The dense forests of the Ardennes were said to be impassable and so were covered with only a light force. As you will read next week, this proved to be a disastrous mistake.

Printed in USA

Foundation Reader Subscription Offer

A subscription to *History of the Second World War* ensures that you don't miss a single Part. We mail each issue directly to your home each week. To help you start your collection, we are offering an introductory subscription at \$9.00 for 12 issues — a saving of \$2.40. Turn to the leaflet in the center of this issue for your order form.

Binders— Special Introductory Offer

The special binders for *History of the Second World War* look like a handsome book binding. Inside, a unique fitting lets you bind in each weekly Part. The binder is designed to hold the 16 parts that will make up each of six volumes. Use the order form in the center of this issue to obtain your Volume 1 binder at half price.

Back Numbers

If you have missed any Parts of *History of the Second World War*, they are available from the publishers at \$1.00 each, including shipping and handling. Write to Back Numbers, History of the Second World War, 6 Commercial Street, Hicksville, New York 11801, or use the order form on the inside back cover of this issue to order your copies.

Norway April 9, 1940

CONQUEST OF NORWAY

Major-General J. L. Moulton

The first part of Hitler's attack had gone according to plan. The vital landings had been made, without undue interference from the Royal Navy. Then came the Allies' counterblow—delivered with an ineffectiveness that demonstrated how ill-prepared they were for modern warfare



German soldiers fight their way through a burning village

It was the intention of both Admiral Forbes and the Admiralty that the Home Fleet, having missed the Germans at sea, should send ships at least into Trondheim or Bergen to catch the Germans there. But, too slow and indecisive in action, they allowed the opportunity to pass, while signals were exchanged and information sought. Thus it was not until 2330 hours on April 9 that Forbes detached four cruisers and seven destroyers for Bergen, which he had already passed 60 miles from the coast on his southerly course. Turning back, the destroyers found themselves forced by a 'head' sea to reduce speed, so that they would be unable to reach Bergen before nightfall—and the attack was cancelled.

But the weather was clearing, and that afternoon the Luftwaffe showed up to carry out its task of protecting the German landings

from the British fleet. A total of 88 Heinkel 111s and Junkers 88s attacked, but neither their bombing nor the anti-aircraft fire that met them was effective, and the action ended with one destroyer sunk, minor damage from near misses to three cruisers, and a hit on the battleship *Rodney* by a 500-kg bomb which failed to explode properly. Four German aircraft were destroyed, only one of which was seen by the ships to crash. The ships had, however, expended a great deal of anti-aircraft ammunition, and the C-in-C, becoming convinced that he could no longer risk his fleet within range of the Luftwaffe without fighter cover, turned north again, abandoning the prospect of surface ship action against the invaders.

Fighter cover could have been given for short periods by the few Blenheim long-range fighters available in Britain, but it was naval

Conquest of Norway (continued)

doctrine that the fleet could defend itself from air attack with its own guns, and there is no evidence that the Blenheims were asked for. Of the British aircraft carriers, the *Ark Royal* had been sent to join the *Glorious* in the Mediterranean when the British forces were dispersed in mid-March, while the *Furious* had been left in the Clyde when the plan to mine the Leads was mounted. She sailed thence early on the 8th after embarking her aircraft, but in a recent refit her hangar space had been reduced in order to increase her anti-aircraft armament, and now she carried no fighters. She met the fleet off the Shetlands on the 10th, and they all turned back towards Trondheim for her Swordfish aircraft to deliver a torpedo attack on the cruiser *Hipper*. They arrived on the 11th, however, to find the *Hipper* gone, and their torpedoes, dropped against two German destroyers left there, failed to hit.

Elsewhere British naval action had had better, though far from decisive, results. Off Kristiansand the submarine *Truant* torpedoed the *Karlsruhe* on the night of the 9th, and damaged the cruiser so badly that the Germans had to sink her. Another submarine, the *Spearfish*, torpedoed the *Lützow*, but the Germans just managed to save her. With permission now granted to sink all north-bound traffic, the submarines in the Kattegat and Skagerrak, running great risks under intensely difficult conditions, scored a series of successes against German troop and cargo ships, and seriously interfered with the German follow-up.

At Bergen, early on the morning of the 10th, Skua aircraft from the Fleet Air Arm, flying at extreme range from Scapa Flow, dive-bombed and sank the light cruiser *Königsberg*.

The same morning Captain Warburton-Lee, without waiting for more powerful reinforcements, took six destroyers up Ofotfjord, surprised the ten German destroyers off Narvik, and sank two and damaged others, although the score was levelled and Warburton-Lee killed in a second sweep. On the 12th the Admiralty ordered Forbes, now approaching Vestfjorden, to send a battleship to complete the destruction of the German ships off Narvik, and the next day the old battleship *Warspite* and all available British destroyers steamed up Ofotfjord to overwhelm the surviving German destroyers.

'We will not submit voluntarily: the struggle is already in progress.' With these brave words the Norwegians had replied to Hitler's demand for capitulation. But they were to find the means available to them woefully inadequate for the struggle.

It was planned that on mobilisation each of the six command districts of the Norwegian army should establish one field brigade, to be followed later by the remaining units of a division and of garrisons, less well equipped and at a slower rate. Caught unmobilised except for the 6th Field Brigade in the far north and a few isolated units near the main cities, the army drew back from the

cities with their ports and airfields, and, confused and uncertain, tried to carry through a mobilisation plan hopelessly dislocated before implementation. In appointing Major-General Otto Ruge C-in-C on the 11th, the government had placed a cool and resolute brain in charge. Soon Ruge's directives went out, removing doubts about capitulation and calling on district commanders to resist the Germans and to pen them in the coastal enclaves they had seized.

In northern Norway Major-General Fleischer had lost one of his battalions with the garrison of Narvik. On April 10 another stopped Dietl's men 16 miles north of Bjerkvik, on the road to Bardufoss, where Fleischer was concentrating his force at the training centre and military airfield. At Trondheim the 5th Command District withdrew north to Steinkjer to mobilise, but in doing so left the military airfield at Vaernes, 25 miles from Trondheim, to the Germans. The artillery had lost its guns in mobilisation store in the city, but Major Holtermann of the 5th Artillery took a volunteer force to the old fort of Hegra, where he conducted a gallant defence, lasting until early May and occupying superior German forces.

At Bergen the 4th Command District withdrew inland to Gol, some 65 miles by rail from Bergen, while at Stavanger and Kristiansand small Norwegian forces withdrew towards the rugged interior. At Halden in the south-east the 1st Command District began to mobilise, and in the less constricted country around Oslo Major-General Hvinden Haug's 2nd District organised its men in four weak battlegroups, and did what it could to block off the exits from Oslo.

On the evening of April 9 the German strength in Oslo had amounted to a mere nine companies, but the next day more troops began to arrive by sea and air, and the German 163rd and 196th Divisions, both of which had suffered losses and disorganisation in passage, set about improvising mobile battlegroups. In a few days these were ready, and now they struck the half-mobilised Norwegians with the full speed and force of the *Blitzkrieg*. On April 12 a reinforced German regiment in commandeered transport advanced 70 miles south down the eastern side of Oslofjord to take Halden the next day. Another struck eastwards. Soon units of the Norwegian 1st District were forced across the Swedish border, and by the 15th all was over in that sector, with 3,000 Norwegians interned in Sweden and 800 held prisoner by the Germans. On the other flank, the German 163rd Division took Kongsberg, 55 miles south-west of Oslo, and Honefoss, 35 miles north-west. In the south the 3rd District, under persistent pressure from the Germans, capitulated on April 15. For the moment Ruge's and Hvinden Haug's men were left to face the invader alone.

On April 13 German battlegroups struck north, four of them probing and thrusting along the roads beside the great lakes, Mjøsa and Randsfjord, and two others driving to the north-west, where the railway to Bergen crosses the mountains. On the 18th the Germans entered Hamar, and on the next day Elverum; two other groups converged on Gjøvik. By the 20th they were in contact with Norwegian positions covering Lillehammer and Rena-Amot



△ General Paget:
commanded the
British forces landed
at Andalsnes

◁ General von
Falkenhorst: planned
and directed the
German campaign in
Norway



Hulton Picture Library



General Dietl (far left):
commanded the
German mountain
troops at Narvik

◁ The Earl of Cork and
Orrery: Admiral of the
Fleet, directed the
British naval
operations

▽ The vaunted
German Panzers,
though they saw
little action in
Norway, were
welcomed by
the infantry



on the twin routes north to Trondheim, where the Germans reported stubborn resistance by a brave enemy, fighting in deep snow in the mountains.

In eight days these boldly handled battlegroups, with superior armament and the ubiquitous support of the Luftwaffe, had advanced 180 miles.

Ruge's instructions to Hvinden Haug were to fight a delaying action, avoiding the commitment of his main forces, while Ruge called in help from Bergen to cover his western flank – and hoped that the Allies would arrive. It was Ruge's hope that he could hold the southern exits of the high, snow-covered moorland north of Lillehammer, so that the British and French, after taking Trondheim, could advance south and liberate Oslo.

News of the extent and success of the German landings came to the British Chiefs-of-Staff and Cabinet as a shattering surprise. On the evening of April 9, however, they decided to make Narvik their immediate objective, and to explore the possibility of using the small ports of Namsos and Andalsnes for a land advance to take Trondheim. During the night of the 7th the Admiralty had ordered the cruisers at Rosyth to disembark their troops, and, with the escorts for the transports in the Clyde, to join the Home Fleet off the Norwegian coast. The attempt had now to be made to mount military forces for Norway from these troops.

Disembarkation and re-embarkation had caused them some disorder and loss of stores, but worse in its effect was the assumption on which the proposed expeditions had been mounted – that they would merely have to forestall weak German detachments. They thus had little field artillery and hardly any armour, while the forces at Rosyth had none of either and were handicapped by re-

duced transport, and the Clyde force was hampered by a high proportion of administrative and support personnel intended to establish a base at Narvik.

Twenty-four hours after the second naval action off Narvik, Major-General Mackesy, commanding the military expedition for that port, arrived at Harstad where he was shortly joined by the 24th Guards Brigade and his base details. Admiral of the Fleet Lord Cork and Orrery, appointed naval commander off Narvik, had sailed from Rosyth on the same day that Mackesy left Scapa Flow. Their orders, however, had not been co-ordinated, and, while Mackesy expected to conduct a slow-moving land campaign, Cork, realising the urgency of the situation, wished to assault Dietl's small force in Narvik from the sea.

When Cork and Mackesy met it was already too late to follow up the shock of the second naval attack with a landing in Narvik itself, and it soon became clear that, for the present, land operations were impossible for troops untrained and unequipped for warfare in snow mountains, while Harstad was quite inadequate as a base for the sort of campaign that Mackesy envisaged. April therefore dragged on into May with the British commanders at loggerheads, while Fleischer's Norwegians bore the brunt of the fighting in the inland mountains.

Hardly had the decision to make Narvik the first objective been taken than the strategic and political importance of Trondheim began to make itself felt. A new plan was therefore prepared to land the 15th Infantry Brigade, withdrawn for the purpose from France, inside Trondheimsfjord, near Vaernes airfield, while two Canadian battalions were landed at the entrance to the fjord to capture the batteries guarding it. In conjunction with this attack,

Conquest of Norway (continued)

the 146th Infantry Brigade and a demi-brigade of the *Chasseurs Alpins* (Alpine light infantry), landing at Namsos, would advance on Trondheim from the north-east; and the 148th Infantry Brigade, landing at Andalsnes, would make a diversion from the south via Dombås.

When the part of the plan dealing with entering Trondheimsfjord was referred to Forbes, he warned that heavy losses must be expected from air attack. The Admiralty, probably inspired by Churchill, told him to think again, and promised him the support of *Ark Royal* and *Glorious* (now on their way back from the Mediterranean), three battleships and supporting cruisers and destroyers, plus attacks on the German-held airfields by Bomber Command. The planning went ahead in spite of delays and the opposition of the Joint Planning Staff—until on April 19 the Chiefs-of-Staff turned against it. Faced with this, Churchill, as Chairman of the Military Co-ordination Committee, was forced to advise the Cabinet against this part of the attack, and recommend that Trondheim should instead be taken solely by land advances from Namsos and Andalsnes.

To the British, mentally and materially prepared neither to face the Luftwaffe nor to undertake an amphibious operation, the cancellation came as a relief. But could they have seen what was happening at OKW (the German Armed Forces High Command), they might have felt otherwise, for about this time Hitler badly lost his nerve and contemplated cutting his losses in Norway. There were two periods of what General Jodl in his diary called *Führungschaos* ('leadership chaos'): from about the 14th to the 18th over Narvik, and from a few days later until the 23rd over Trondheim. On the 24th tension began to relax, and when on the 30th news arrived that German forces from Oslo had linked up with those at Trondheim, Hitler turned his attention from Norway to the great offensive preparing in the west.

Namsos and Andalsnes each lie roughly 100 miles as the crow flies from Trondheim, to the north-east and south-west respectively, but troops moving by road or rail faced longer journeys through the snow-covered countryside: 125 miles from Namsos and 195 miles from Andalsnes.

The 146th British Infantry Brigade landed at Namsos on the nights of April 16 and 17 and established contact with Colonel Getz, now commanding the Norwegians at Steinkjer. Namsos was under German air surveillance, and the troops were sent on by train to Steinkjer as they landed. Thence one battalion was sent farther south to support Norwegian outposts at the northern end of Trondheimsfjord, with a second battalion immediately south of Steinkjer. Steinkjer lies on Beitstadfjord, a northerly extension of Trondheimsfjord. On the 19th two German destroyers penetrated sufficiently far into the ice-bound Beitstadfjord to land troops to the flank and rear of these battalions, and after some fighting the 146th Brigade was that night ordered to withdraw through Steinkjer.

The order went out late, and the troops were unable to get clear in darkness, but, after some losses, they made good their escape in long, cross-country marches through the snow. A new line was established with the Norwegians some miles north of Steinkjer; it coincided roughly with the line set by the Germans to secure their northern flank. Although there was little further action, in the next few days Namsos was destroyed under air attack.

The two-battalion 148th Infantry Brigade landed at Andalsnes and Molde on the night of April 18, having had to leave two companies and its limited transport to follow in a second convoy. Brigadier Morgan in command was at once put in touch with the British and French military attachés, now with Ruge near Lillehammer, who told him that British troops were badly needed to support the Norwegians. Reaching Lillehammer by train during the night of the 19th, Morgan's six available companies were, at Ruge's urgent request, distributed across the Mjøsa front under Norwegian command. Ruge himself was bitterly disappointed at the weakness of the only Allied force which had come to his aid, but he seems to have held to his intention of fighting south of the valley exits.

On the 21st the Germans attacked in strength. The British companies had not yet taken over forward positions, but were employed during the night as rearguards to cover the Norwegian withdrawal through Lillehammer. Early in the morning of the 22nd, Morgan, on Ruge's order, reassumed command of the four companies which had been deployed east of Mjøsa. These were now to hold the Balbergkamp position, a few miles north of Lillehammer covering the entrance to the Gudbrandsdalen. They had been marching through the night, some had been cut off in a rearguard action, and now, in strange and hard conditions, ill-armed and unsupported, they had to face far superior German forces.

That afternoon the Germans attacked them on the Balbergkamp

position. The forward troops were already threatened and in trouble when two companies of German mountain troops appeared above the valley road behind Balbergkamp, having gone round the hill flank. They were held off, but under this threat, and that of air attack, withdrawal was difficult and disorganised, and about half the fighting troops were cut off and lost. Luckily, as the remainder withdrew, the two companies left at Rosyth for the second convoy arrived to cover the withdrawal and to hold Tolstad, about 16 miles north of Lillehammer.

That night Ruge ordered Morgan to hold a position covering the bridge at Tretten, which could be used by Norwegian Group Dahl to rejoin Hvinden Haug in the Gudbrandsdalen. Morgan protested that he could only do so at risk, but Ruge insisted and gave him three weak squadrons of the Norwegian 2nd Dragoons to cover his hill flank. These and the two British companies from Group Dahl reached Tretten during the morning of the 23rd, but the company at Tolstad was overrun, and about 1300 hours the Germans attacked Morgan's main force. A few light tanks, against which the British anti-tank rifles had little effect, broke through, isolated the British and Norwegians on the hill flank, and brought the village and the bridge under fire. There Morgan's men held on until early evening, then withdrew. A small rearguard a little north of the village was overrun at 2130 hours, and then what was left of the two battalions was embussed and taken north through Norwegians holding the next position some miles up the valley.

Thus the weak British force which came south was quickly destroyed. That it was composed of partly trained Territorials had little to do with the outcome, for it is difficult to imagine that any troops could have been effective under the conditions to which these were exposed. Nor, as is sometimes alleged, was Group Dahl prevented by the loss of Tretten bridge from rejoining Hvinden Haug, for the Norwegian official history of this campaign indicates that Dahl had already decided not to make the attempt.

In the Østerdal, too, the Germans had attacked on the 21st, taking Rena and Åmot. The next day two columns drove north along the Rena and Glomma rivers, meeting on the 24th at Rendal, and

The British are forced to withdraw

driving on through the night to reach Tynset, nearly 100 miles from Rena, early on the 25th. On the 24th, Group Fischer in the Østerdal—three infantry battalions with artillery, engineers, and motorised machine-gun units—came directly under command of Falkenhorst with orders to open the route to Trondheim. At the same time Group Pellengahr in the Gudbrandsdalen—seven infantry battalions with artillery, engineers, motorised machine-guns, and a platoon of tanks—was ordered to drive through to the British base at Andalsnes.

On April 24 Group Pellengahr continued to advance against Norwegian delaying action and then on the 25th met the 1st Battalion KOYLI (King's Own Yorkshire Light Infantry) holding Kvam, 55 miles north of Lillehammer. The 15th Infantry Brigade had disembarked at Andalsnes early on the 24th, and had hastened south on indefinite reports that the 148th was in serious trouble. The last two companies of the KOYLI reached Kvam at 0430 hours on the 25th, and at 2330 hours the head of the German column appeared, advancing well-closed-up on the narrow valley road, confident that its enemies had neither the artillery nor the aircraft with which to punish its rashness. The Germans attacked and were held, but the attacks continued through the day and most of the next. Finally, at 1800 hours on the 26th, Major-General Paget, recently arrived to command the British troops landed at Andalsnes, gave the order to withdraw. The withdrawal was successful; although two companies were cut off on the hillside, they managed to make their way back during the night.

Next morning the advancing Germans found themselves held again 5 miles up the valley at the hamlet of Kjorem—by the men of the 1st Battalion, the York and Lancaster Regiment. The British withdrew that night, but this time with some losses, and the Germans advanced a few miles on the 28th to find themselves held once more, this time at Otta by the 1st Green Howards.

The German advance had thus been held down to 18 miles—11 from Kvam to Otta—in four days, but that night the Green Howards were ordered to withdraw nearly 30 miles through the most mountainous and easily blocked part of the Gudbrandsdalen to Dombås. German infantry met the KOYLI covering Dombås on the evening of the 29th, but were unable to prevent a British withdrawal down the Romsdal to Andalsnes, where on the nights of April 30 and May 1

Control of the lines of communication along the valleys enabled the Germans to thrust rapidly north







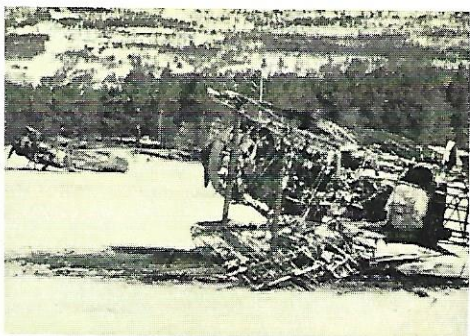
German mortar in action against Norwegian mountain troops



British prisoners captured near Trondheim



The British based a squadron of Gloster Gladiators on frozen Lake Lesjaskog (above). But a sudden air raid destroyed most of them (below) before they could affect the fighting



As dusk gathers over the Norwegian fjords, a German anti-aircraft unit (left) keeps watch over this outpost in the north, a new bastion in Hitler's Fortress Europe. The date: 15th June 1940, six days after the Norwegian capitulation

Conquest of Norway (continued)

the British troops re-embarked. Similar orders had been issued at Namsos, where re-embarkation took place on the night of the 2nd.

Three things had forced the British Chiefs-of-Staff and Cabinet to order withdrawal from central Norway. First, the British troops in the Gudbrandsdalen were, with the exception of a little light anti-aircraft artillery, purely infantry. The 15th Infantry Brigade's small 25-mm anti-tank guns had been able to deal with the weak German armour deployed against it, but the absence of field artillery was fatal. The Germans were able to bring up their own guns and fire over open sights, and could do what they pleased outside the range of small arms. Second, although the 15th Infantry Brigade succeeded in slowing down the advance of Group Pellengahr, Group Fischer in the Østerdal had made rapid progress, and, branching across the Dovrefjell, was now threatening the flank and rear of Dombås, while at the same time achieving the German objective of linking up with Trondheim.

Greater in its effect than either of these, however, was the German command of the air. With the Luftwaffe firmly established at Sola and Fornebu, and with advanced elements at Vaernes, the Germans dominated the valleys, making movement by daylight hazardous and costly. Worse, they made Namsos and Andalsnes unusable, thus re-

The battle for Narvik

moving any possibility of the Allies landing heavier forces or supporting those already ashore.

Early on April 17 the cruiser *Suffolk* bombarded Sola airfield with some limited success, but cover for the withdrawal was mismanaged. Soon after her guns fell silent, the Luftwaffe came after the lone, lightly armoured ship like hornets from a hive. In repeated attacks they damaged her severely, but failed to sink her, and she limped back to Scapa Flow, her quarter-deck awash.

On April 25 an attempt was made to provide fighter cover for Andalsnes by establishing the Gladiators of 263rd Squadron on frozen Lake Lesjaskog, but this too was mismanaged, and with ground crews ill-organised, most of the fighters were, in the course of one day, destroyed on the ground while refuelling. A carrier group formed around the *Ark Royal* and *Glorious* was more successful off Trondheim, but its effort, dispersed in time and space and uncoordinated with any other, failed to achieve more than isolated successes. Thus withdrawal from central Norway became inevitable.

On April 28 Paget broke this news to Ruge, who received it chivalrously and generously, offering to help in any way he could. At Namsos, with less wisdom, the news was withheld from Getz until the last moment, adding unnecessarily the suspicion of bad faith to the inevitable bitterness of withdrawal.

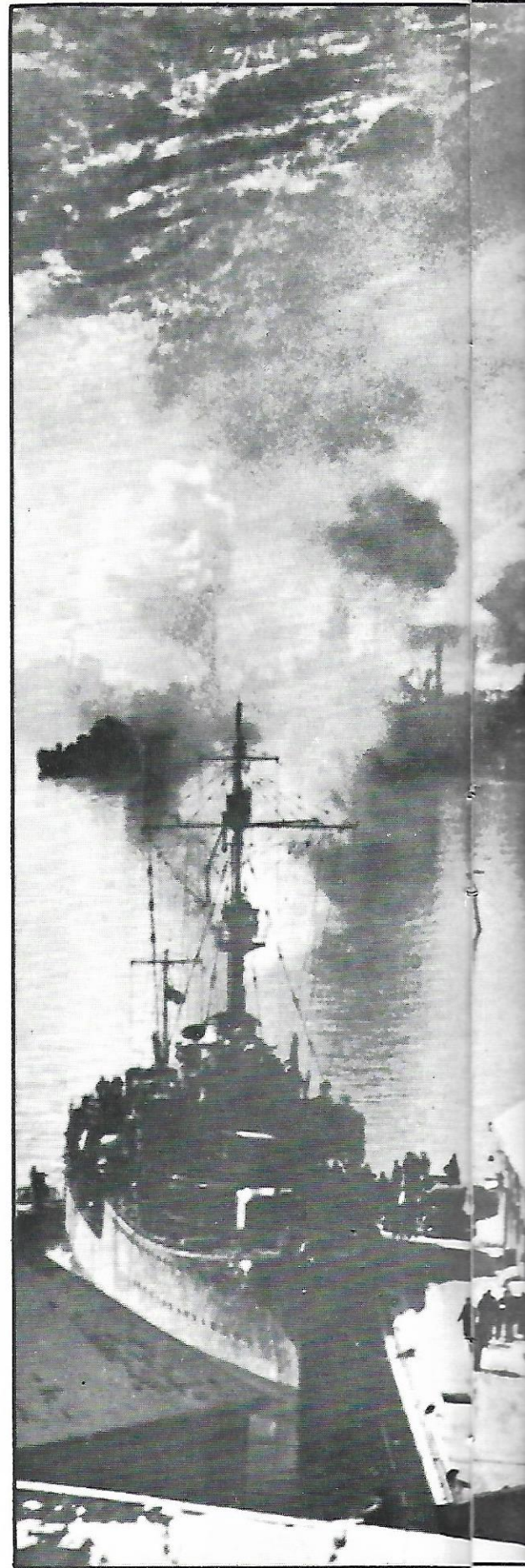
The withdrawal of Allied forces from central Norway, accompanied as it had to be by Norwegian capitulations there, left Narvik and the north as the sole theatre of operations. There the German commander Dietl, isolated and surrounded, commanding a force of 2,000 mountain soldiers and a rather larger number of seaman survivors from the German destroyers, was proving an awkward nut to crack.

During April, Mackesy had been reinforced by a demi-brigade of *Chasseurs Alpins*, another of the Foreign Legion, and by a brigade of Polish *Chasseurs du Nord*, as well as by some artillery and a few tanks. He had established positions astride Ofotfjord by landings clear of the German positions, but by the beginning of May the inability of the large Allied force to do anything much against Dietl was becoming intolerable. Now at last they turned from the snowy mountains, where only the Norwegians and Germans could fight, to the natural highways of the north – the fjords.

Early in May, Cork was appointed overall commander of the British, French, and Polish forces around Narvik. In the French commander, Général de Division Béthouart, he found a soldier more willing to act than Mackesy. At 0100 hours on May 13 in the arctic twilight, the 1st Battalion of the Foreign Legion and three French tanks were landed at Bjerkvik in the seven available British landing craft. Despite German machine-gun fire, casualties were not severe. The tanks soon silenced the machine-guns, and the legionnaires advanced up the road to meet the Norwegians, who in the mountains to the east had prepared the way for the landing by a renewed attack.

It remained to capture Narvik and round up Dietl. Lieutenant-General Auchinleck, who had arrived at Harstad on May 11, decided shortly afterwards to take over from Mackesy, but wisely did not break the partnership between the Foreign Legion and the Royal Navy, which was beginning to show results. By now the Norwegians

Continued on page 93





Wrecked ships clog Narvik harbour. In two battles (April 10 and 13) British warships sank the destroyers that ferried German troops

Conquest of Norway (continued)

had pushed back the Germans and reached the high Kobberfjell area, threatening Dietl's supply base on the Swedish frontier. Conditions were severe. Norwegians and Germans alike suffered from long exposure in the mountains and snow, and the men of Dietl's overstretched force were approaching a state of complete exhaustion. On May 20 the Norwegians attacked once more, forcing the Germans back into their last mountain position. On the 22nd and 25th Dietl received his first reinforcements since April: paratroopers who had taken part in the first *coups* were dropped to him and then dropped again in Holland.

At last, in the early hours of May 28, after a preliminary naval bombardment, the men of the Foreign Legion landed on the northern side of the Narvik peninsula from the five remaining landing craft. The rest of the two battalions of the Legion, plus a battalion of Norwegians, followed in fishing craft. A German attack on the beachhead was beaten off. The French and Norwegians advanced across the peninsula to take Narvik, and the Germans withdrew as best they could to a new position farther up the peninsula. Now Béthouart prepared to press his advantage along the fjordsides, while in the mountains near the Swedish frontier the Norwegians made ready for the last attack which would cut Dietl off from the railway and disperse his force. Unfortunately, however, the end of resistance in central Norway had freed forces to press north to Dietl's relief.

The first danger that threatened the Allies in the north was air attack. Harstad had been bombed on many occasions, and although a considerable anti-aircraft defence had been built up there, fighters were clearly needed. On April 26 the *Furious*, which had remained in the north with her slow Swordfish aircraft for reconnaissance and bombing, sailed for Scotland with only six aircraft left, and her speed reduced by near misses. Ten days later the *Ark Royal* arrived off Harstad and her Skuas gave a little, but much welcome, fighter cover.

Work had been in progress to prepare fighter airfields, and on May 21 the Gladiators of 263rd Squadron arrived at Bardufoss, where—having learned from its experiences at Lesjaskog—its preparations and organisation were excellent, and at once it began to shoot down Germans. On the 28th the Hurricanes of 46th Squadron reached the area, and, as a second landing strip prepared near Harstad proved unusable, came on to Bardufoss. From then on the Allied forces had a degree of fighter cover.

But the Germans had also started north by land. On May 10 the leading troops of the II Mountain Division, sent to Norway by Hitler's orders at the time of the *Führungschaos*, made contact with the British 5th Independent Company at Mosjøen, 180 miles north of Steinkjer. Five independent companies had been hastily formed to delay the Germans by guerilla tactics, but it soon became apparent that such improvised troops were no match, in the arctic thaw, for trained mountaineers.

Auchinleck then sent the 24th Guards Brigade south to delay the German advance, and Ruge sent a Norwegian battalion. Misfortune dogged the move, however, for the Irish Guards lost all their senior

The British and French sail for home

officers and their equipment when the ship on which they were travelling, *SS Chobry*, was bombed; and *SS Effingham*, carrying the South Wales Borderers, tried to take a short cut through poorly charted waters and stuck fast on a reef. Eventually, however, delayed and disorganised, under constant air attack and with little support from their seaward flank, the Guards found their positions but failed to slow the German advance effectively, and after several engagements the Germans were on the 26th approaching Saltfjord, on the north coast of which stands Bodö.

By this time, disastrous events in France and the Low Countries were making themselves felt. Faced by the extreme seriousness of the situation, the British Cabinet reluctantly decided to abandon its commitments in Norway, and ordered Cork to withdraw, if possible capturing Narvik first. On May 31, therefore, the 24th Guards Brigade and the independent companies were embarked at Bodö. The Norwegians isolated there covered their own withdrawal to the Lofotens, and the Germans marched into Bodö, which their bombing had already burned out.

As has been told, Narvik was taken by the French and Norwegians on May 28—but preparations for evacuation had begun while those for the capture of Narvik were still being completed. On the evening of June 1, Cork was at last permitted to tell King Haakon of the

Continued on page 94



French soldiers about to embark for Narvik. After a seven-week siege of that town, Anglo-French and Norwegian troops forced the Germans to withdraw



Conquest of Norway (continued)

intended withdrawal, and Ruge was told the next morning. A 24-hour postponement was agreed in the hope that the Germans would allow Narvik to be neutralised under the Swedes, but the appeal was in vain, and the withdrawal continued.

In the mountains, the Norwegian soldiers were told that their attack—which would have completed Dietl's defeat—was cancelled, and on June 7 King Haakon and the Norwegian ministers embarked in the cruiser *Devonshire* at Tromsø, leaving Ruge at his own request with his soldiers. On the 8th the last British and French embarked at Harstad. Air defence remained active until the last moment, after which the guns were destroyed and the fighters flew off to land on the *Glorious*. On the 9th a preliminary armistice between the Germans and the remaining Norwegians came into force. Dietl treated Ruge generously, and the Norwegian soldiers dispersed to their homes.

Unrealised by the British, the greatest danger at this time threatened not from the land or the air, but from the sea. The battle-cruisers *Gneisenau* and *Scharnhorst*, the cruiser *Hipper*, and four destroyers sailed from Kiel on the morning of June 4. Admiral Marschall, in command, had orders to relieve the pressure on Dietl by an attack on Harstad, then to base his ships on Trondheim

The Germans achieve all their objectives

to assist the advance north. Although the weather was fine, the ships passed undetected through the North Sea, met an oiler at their rendezvous, and approached the coast of northern Norway in search formation early on the 8th. Marschall had decided to attack British convoys reported at sea, rather than to enter the fjords to bombard Harstad, and almost at once the Germans found British ships. They sank the first two ships they met—a tanker and an empty liner, the *Orama*—but let a hospital ship go. Then they met the *Glorious*.

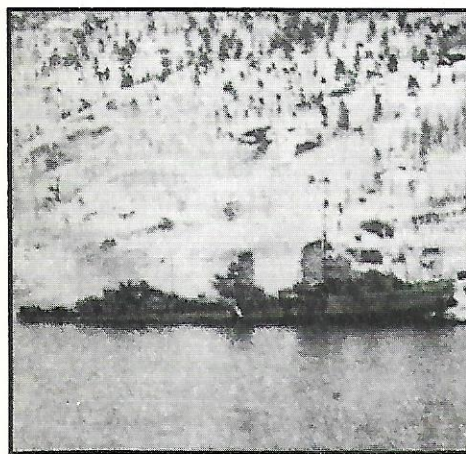
Why the *Glorious* had no aircraft on patrol that morning has never been adequately explained, but, meeting the Germans without warning, she was trapped and sunk, despite the gallant and skilful attempt of her two escorting destroyers to save her, in which they were themselves lost. The last torpedo from the *Acasta*, however, hit and seriously damaged the *Scharnhorst*. Admiral Marschall had already sent the *Hipper* and destroyers back to Trondheim, and now the *Gneisenau* had to escort the *Scharnhorst* there, sparing the British convoys from further attacks.

On June 10 air reconnaissance found the German ships in Trondheimfjord, and on the 12th *Skuas* from the *Ark Royal* attacked them under unfavourable conditions. Half of the attacking aircraft were shot down, only one bomb hit, and that, on the *Scharnhorst*, failed to explode. On the 23rd the *Gneisenau*, covering the return of the *Scharnhorst* to Germany, was hit by a torpedo from the British submarine *Clyde*, and a large hole was blown in her bow. Both damaged battle-cruisers had to be docked for repairs.

In the scale of the two world wars, losses on both sides in the Norwegian campaign were light: 1,335 Norwegians killed and wounded, 1,869 British and 533 French and Polish killed, wounded, and missing on land, with considerably greater loss of life at sea. The German casualties were 5,660, of which 1,317 were killed on land and 2,375 lost at sea or otherwise missing. The claim made at the time by Churchill that the German navy had been put out of action at a cost that the larger British fleet could afford may have been some consolation, but was hardly an excuse for a campaign in which the Germans had achieved all their objectives, and the Allies none.

The Norwegian campaign, initiated in London by Churchill and the Admiralty and in Berlin by Raeder and the naval staff, was primarily a clash of sea and air power. In it Raeder successfully staked on surprise and on the ability of the Luftwaffe to hold off the British fleet. Churchill, looking for some means to exploit the British command of the sea, miscalculated the effectiveness of his weapon. Controversialists had pressed the rival claims of ships and aircraft for years, yet when the inevitable clash occurred, the Home Fleet was ill-prepared to meet it, and turned away, leaving central Norway to its fate.

Once the Germans were ashore, a fleet by itself was helpless against them: land and air forces were needed. So a pattern was set of warfare in three elements, a pattern which would appear again and again in the years which lay ahead. As the campaign in Norway showed, it was a pattern of war for which the British in 1940 were ill-prepared—partly because they were wholly unready for war, but also because they lacked the vision to see beyond the narrow bounds of single service orthodoxies and loyalties.



The German destroyer *Georg Thiele*, beached during the naval action on April 13



Sinking vessel in Narvik harbour, photographed through a German telescope

MILITARY BALANCE

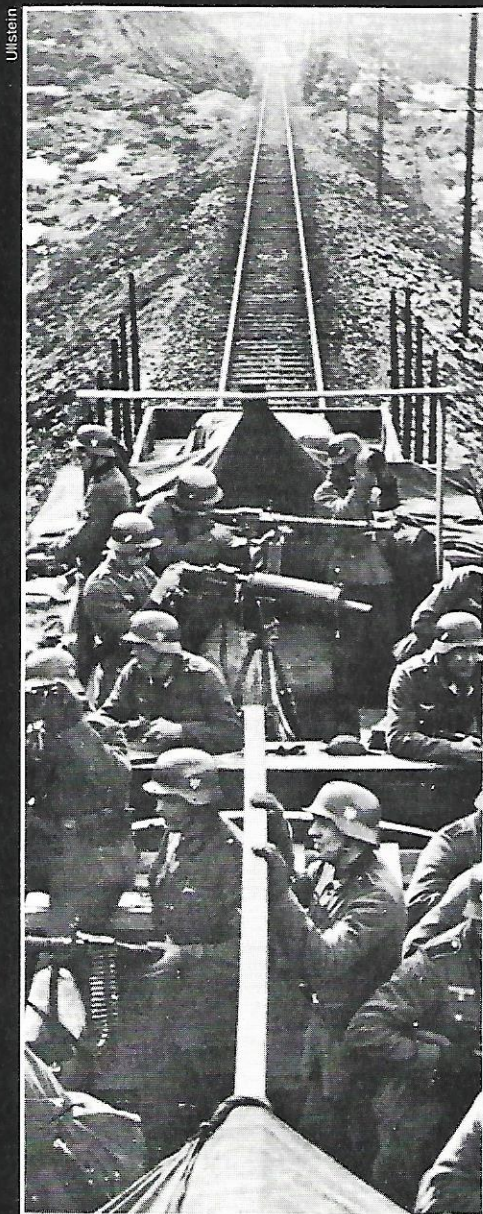
On the evening of May 9, 1940—the day before the German onslaught on western Europe—there were 2,350,000 Germans with 2,700 tanks and supported by 3,200 aircraft poised on Germany's western frontiers; facing them between Basel and the North Sea were 2,000,000 Frenchmen, 237,000 British, 375,000 Belgians, and 250,000 Dutchmen, with 3,000 tanks and supported by 1,700 aircraft. The Germans therefore had considerable superiority in the air and the Allies a comparatively small numerical superiority on the ground. But, as often happens, statistics alone are misleading; there were major differences between the two sets of forces. In fact, two differing concepts of land warfare stood opposed. This was the governing factor and from it stemmed the majority of the differences in organisation, equipment, and planning

During the inter-war period the French army had been looked upon by the world in general and by the French in particular as the fount of military knowledge in so far as large-scale continental warfare was concerned, and the French Staff College was the Mecca for aspiring officers from many nations. Perhaps understandably, French military thinking had not progressed beyond modernisation of the strategy and tactics which had brought them victory in 1918. The defence was held to be inherently superior to the attack, the balance being capable of adjustment only by use of a very great weight of material, mainly in artillery. The attack was therefore conceived as a slow and ponderous affair, tanks being used primarily in close support of infantry or to take the place of horsed cavalry in a reconnaissance or screening role. Much emphasis was laid upon the necessity of maintaining a continuous line. Aircraft were used for reconnaissance and interdiction, not for close support of land operations.

The Belgians and Dutch, who made little pretence of possessing modernised forces, followed the French school of thought.

The Germans had had one considerable advantage—they had had to rebuild their forces from nothing. They were inhibited neither by traditional military thinking—for their political leaders overrode their most entrenched military die-hards—nor by the possession of large quantities of equipment designed for the First World War. The Treaty of Versailles had forbidden them an air force and had limited their army to 100,000 men; this force they had used, with some limited assistance from Russia, as a basis for experimentation and expansion. They had studied and absorbed the more advanced theories of land warfare (developed primarily in England by such men as Captain Liddell Hart and General Fuller) and, under the influence of thoughtful and forceful generals like Guderian and Thoma, they based their concepts upon concentrated offensive action and highly mobile operations aimed at deep penetration far in rear of the 'front' or 'line'.

For this purpose, tanks were grouped in armoured divisions or corps, and used in massed formations with aircraft taking



The Germans increased their mobility by seizing key communication routes

the place of close-support artillery; parachute troops were developed to seize defiles and crossings of major obstacles, ahead of the armour. Concentration, mobility, and bold leadership were the three pillars of German strategic doctrine, and in September 1939 the German regular army had proved to their own satisfaction that the system worked—at least, that it had done so against an enemy of the strength of the Poles.

The British stood halfway between the French and the Germans. They had had the ideas but had been slow to put them into practice. The majority of Liddell Hart's and Fuller's disciples were still in comparatively low positions and in general the prophets 'had not been without honour save in their own country'. Financial stringency in the inter-war years had also exerted a deadening influence; 'Imperial policing' had loomed large among the army's tasks, and the 'picketing the heights' mentality, born and bred on the North-West Frontier of India, died hard. The RAF tended to regard air warfare as an activity totally distinct from war on land and to resist any too intimate involvement in a land battle.

During the 1930's experiments had been carried out with a mechanised force on Salisbury Plain and in 1940 an armoured division was being formed. The fact remained, however, that on this evening of May 9 there was no British armoured division in France and one-third of the BEF's tanks were 'I' tanks designed only for close support of infantry.

These then were the ideas. Now let us examine the practical consequences to which they led.

The most visible and physical expression of the French belief in the power of the defensive was the Maginot Line, begun in 1929 and named after the Minister of War at the time. It covered the French eastern and north-eastern frontier from Basel to Longuyon—in other words, the whole length facing Germany and Luxembourg. From Basel to Haguenau, the Rhine—in itself a formidable obstacle—was at the same time the frontier; the Line therefore consisted of no more than a dense network of concrete pillboxes. From Haguenau westwards, however, it was, and still is, the most formidable military construction of its type

Military Balance (continued)

ever completed and was to all intents and purposes impregnable. Hills had been scarped for miles as an anti-tank barrier; gaps were sealed by anti-tank ditches and obstacles. The main works were veritable underground fortresses not unlike a battleship inside, with self-raising gun turrets, ammunition hoists, and underground electric railways to move the ammunition from the fire-proof magazines; the major forts required a garrison of near battalion strength. But this great defensive effort ended at Longuyon. Thence to the sea the frontier was covered only by improvised defences, mostly constructed after the outbreak of war.

On the German side was the West Wall, commonly known as the Siegfried Line. It had been more hurriedly constructed and did not include forts of the size and complexity of the French. Begun in 1936, it had been conceived as a protection to the German flank during a campaign in eastern Europe. As with its French counterpart, time and money had run out before it had been completed, and in May 1940 it ended a few miles north of Aachen.

The Maginot Line severely limited the area in which the Germans could launch the mobile offensive operations demanded by their strategy. Nevertheless the balance of advantage was in their favour. The Maginot Line had lulled the French into a false sense of security and was a factor in the growth of a defensive mentality. In May 1940 one in seven of the French divisions in the north-east theatre was a fortress division capable only of fighting from its fortifications. By comparison the German garrison of the Siegfried Line was a very small proportion of the German army.

Under the 'North-East Front', which was responsible for the defence of France from Basel to the North Sea, the French had a total of 94 divisions in the field:

- 63 infantry divisions
- 7 motorised infantry divisions
- 3 armoured divisions
- 3 light mechanised divisions
- 5 cavalry divisions
- 13 fortress divisions.

Of the normal infantry divisions 30 were active (regular) divisions; the remainder were reserve divisions constituted only on the outbreak of war and composed of reservists with a small regular cadre. Except in the motorised divisions, infantry transport was still horsed; so were the cavalry divisions. The fire power of a French division was nevertheless high; it included a total of some 90 guns of varying calibre, not counting anti-tank and anti-aircraft weapons. Overall the French army went into battle with a total of over 11,000 guns, approximately 50% of which, however, were the well-known '75s' of the First World War; good though the gun still was, it was rapidly becoming obsolete.

The British Expeditionary Force (BEF) consisted of ten divisions (five regular, five territorial), all of which were partially motorised infantry divisions. On May 9, 1940, the only British armoured division was still training in England and the armour available to the BEF consisted of one army tank brigade, two light armoured reconnaissance brigades, and three divisional cavalry

regiments. The total tank strength of the BEF was approximately 300.

The Belgian army comprised 22 divisions, including two cavalry and two *Chasseurs Ardennais* divisions, which were partially motorised. The remainder were infantry. There was no armour.

The Dutch army provided 10 divisions, all infantry apart from one light division. Again there was no armour.

On the German side, a total of 136 divisions was earmarked for employment in the west. They consisted of:

- 118 infantry divisions
- 7 motorised infantry divisions
- 10 armoured divisions
- 1 cavalry division.

Parachute troops belonged to the Luftwaffe. Of the infantry divisions only 35 were active; the remainder were reserve divisions formed on the outbreak of war in seven 'waves'. Compared to the French, the German army was under-gunned, possessing only 7,700 guns against the French 11,000. The standard German field gun, however, was the 105 mm, a superior weapon to the French 75, and a further example of the advantage accruing from complete, though enforced, re-equipment.

In this outline of forces available, the formations which leap to the eye are, of course, the ten German armoured divisions. In divisional-size formations the Allied list shows only the three armoured and three light mechanised divisions of the French army. Yet, as we have seen above, the Allies had

The total Allied air strength was 1,700 aircraft

in fact a small overall numerical superiority in tanks. The majority, however, were deployed in 'penny packets', distributed along the front for close support of infantry.

Because the Dutch and Belgian air forces were negligible, on the Allied side we have only the French and British to consider.

The French air force had been sadly neglected during the inter-war period and comprised a total of some 1,200 aircraft:

- 600 single-seater fighters (Morane, Bloch, Dewoitine, Curtiss and Loire)
- 100 twin-seat fighters (Potez 63)
- 150 to 175 bombers
- 350 to 400 reconnaissance.

The British air forces in France totalled approximately 500 aircraft:

- 130 fighters (Blenheim, Hurricane)
- 220 light bombers and reconnaissance (Battle, Blenheim)
- 50 army co-operation planes (Lysander).

These do not, however, represent the full extent of the British contribution since air forces based in the United Kingdom, particularly Spitfire squadrons, could be, and were, used in France.

Total Allied air strength was therefore approximately 1,700 aircraft.

Against this the Luftwaffe could produce a formidable force:

- 1,000 fighters (Me 109 and 110)
- 1,200 bombers (He 111)
- 350 Stukas (Ju 87, Ju 88)
- 250 medium bombers (Dorniers)
- 400 scouts.

The German total was therefore 3,200 aircraft, a numerical superiority of nearly two to one. Moreover, in almost every department German aircraft were technically

superior to their Allied counterparts. The only Allied aircraft which could indisputably get the better of its German opposite number (the Me 109) was the Spitfire. It will also be noted that only the German air force possessed a Stuka (dive-bomber) force, the close-support artillery for the armoured formation. The Luftwaffe had been tailored to its job.

On the German side the problem of high command was comparatively simple. They had only themselves to consider, and their organisational problems were merely those created by Hitler himself; he had assumed the position of Supreme Commander and exerted his influence primarily through *Oberkommando Wehrmacht* (OKW), the defence staff of the German armed forces, which was in effect little more than his personal military bureau. It was Hitler who had pushed his somewhat unwilling military command into preparations for a campaign in the west, and he had taken an active personal part in its planning; he had not, however, at this stage of the war, begun to interfere in the actual conduct of operations.

Each of the three services had its own high command: the army, *Oberkommando des Heeres* (OKH); the navy, *Oberkommando der Kriegsmarine* (OKM); the air force, *Oberkommando der Luftwaffe* (OKL). The C-in-C of the army was von Brauchitsch, while the C-in-C of the Luftwaffe was Göring.

The forces standing ready on the western frontier were divided into three army groups:

● **In the North**—from the North Sea to the southern tip of Holland (opposite Maas-tricht) Army Group B (Bock)—29½ divisions, including three armoured, two motorised, one airborne, and one cavalry—with Air Fleet II (Kesselring);

● **In the Centre**—from the southernmost tip of Holland to the south-eastern corner of Luxembourg, Army Group A (Rundstedt)—45½ divisions, including seven armoured and three motorised; with Air Fleet III (Sperrle);

● **In the South**—from Luxembourg to the Swiss frontier facing the Maginot Line, Army Group C (Leeb)—19 divisions. A considerable reserve of 42 divisions was retained under direct control of OKH.

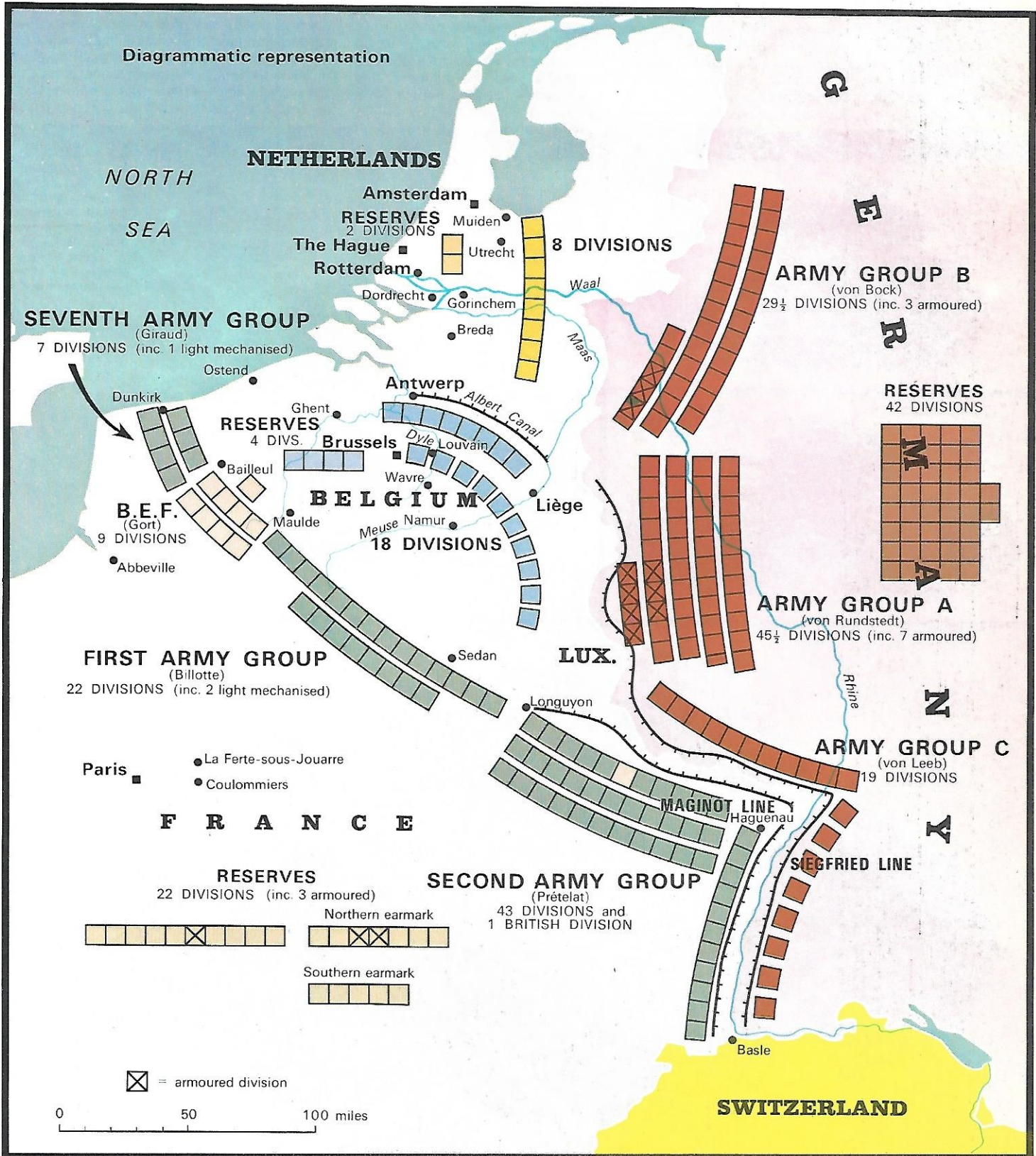
A number of points stand out from this grouping. In the first place almost the entire weight of the German army and air force was concentrated in the northern half of the western front; the whole length of the Maginot Line was watched by only 19 divisions out of a total of 136. Secondly, within the Northern Sector the main 'punch' was concentrated in Army Group A, opposite the Belgian and Luxembourg frontiers: Rundstedt had seven out of the ten armoured divisions and three of the five that were motorised. Finally, the air organisation was simple and logical: each attacking army group was supported by an air fleet containing fighters, light bombers, and reconnaissance aircraft; and the dive-bombers, the close-support artillery for the armour, were centralised under OKL. Concentration, the first pillar of German strategy, was the key-note.

With the Allies, the high command problem was by no means so simple. Four nations were involved and two of them, Belgium and Holland, were determined to maintain their neutrality up to the last possible moment. Not only could there be

Continued on page 100

The balance of land forces before the onslaught

The tank was to be decisive in the coming campaign. But the Germans did not have more or even markedly better tanks than the Allies. They just used them more imaginatively



Armoured Balance

The Allies, in theory, could oppose the 3,000 German tanks with 3,600 of their own. The British infantry tanks, both the Mark I and the 'Matilda' Mark II, could stand up to the heaviest German tank fire, as could the French 'Char B'. No British tank, however, combined speed with hitting power, as with the more advanced German concept of tank design. The British light and cruiser tanks in particular were vulnerable

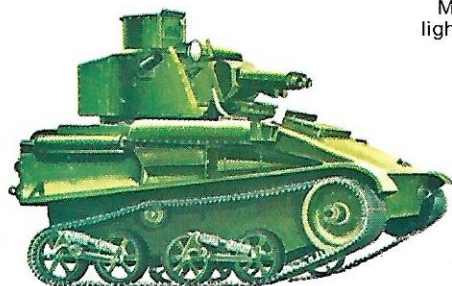
German tank crews were well matched by the British but the defects of the French designs gave the Germans, relying on a firmer teamwork in battle, a definite advantage over French tank formations. The thinner German armour was the sacrifice made for other advantages which tipped the scale against the superior strength of individual Allied types. Similar use of armour in mass was therefore denied to the Allies

Military Balance (continued)

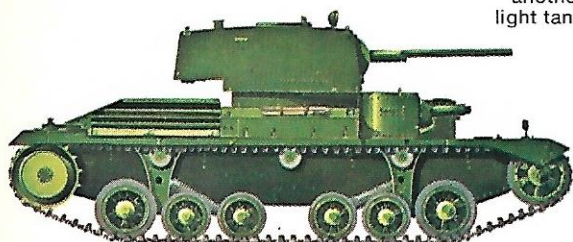
no question of a unified Allied command but the Belgians and Dutch had refused even to hold staff conversations with their political allies or to co-ordinate their plans between themselves.

Even between the British and French there was no integrated command in the later sense of that word. Although he was under overall French command, Lord Gort at the head of the BEF was a C-in-C in his own right as well as an army commander, and retained a certain independence of status. Finally, the French and British were physically separated from their future allies and the latter from each other, since no movement across their national frontiers by each other could take place without

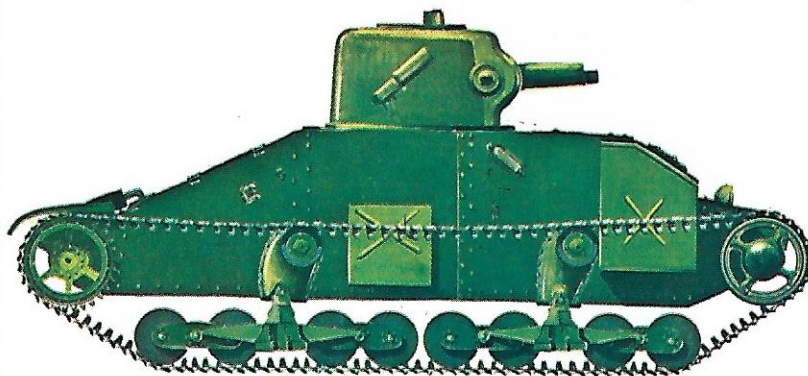
BRITISH



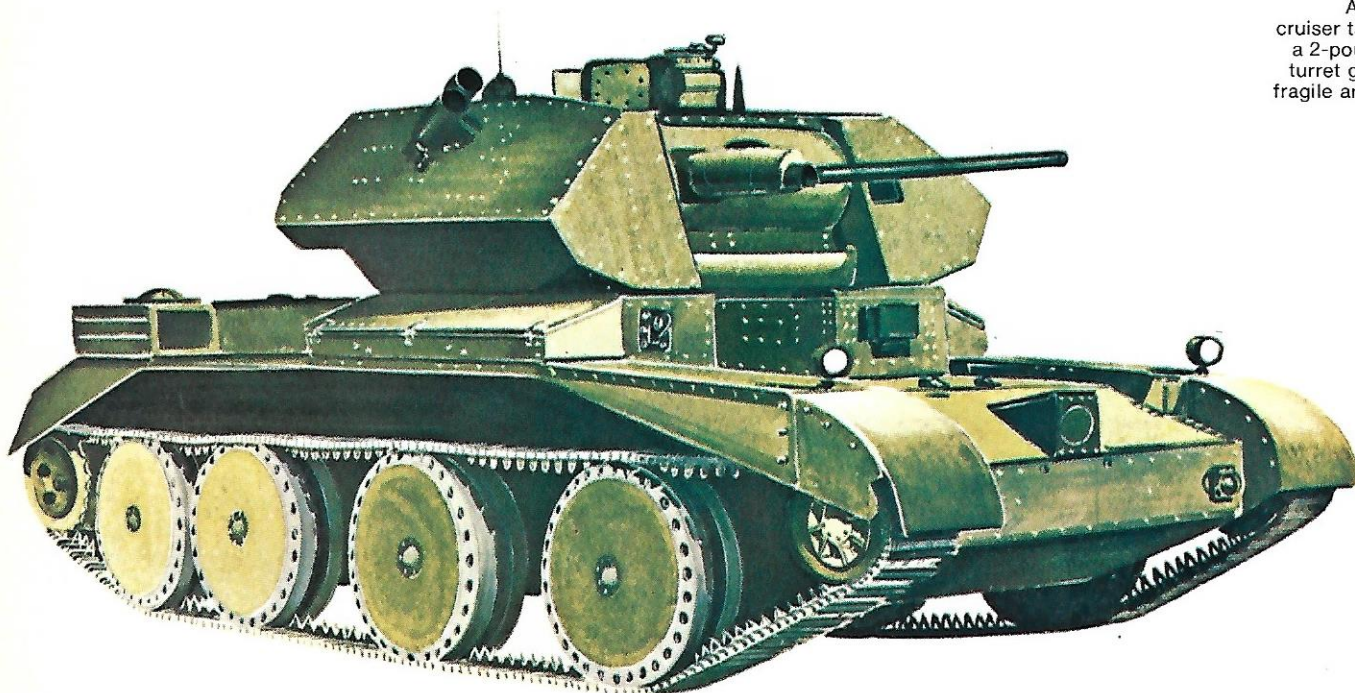
Mark VI
light tank



A-9—
another
light tank



Infantry
Mark I (the
'Matilda' was the
Mark II). Better
armoured than the
'Char B', the
Marks I and II
were equal to the
fire of any German tank



A-13—
cruiser tank—
a 2-pounder
turret gun in
fragile armour

formal invitation—and this would not be issued before the Germans moved. Fifty per cent of the Franco-British forces were not directly facing their enemy.

The French command system was a peculiar one. At the head of the French army was General Gamelin, responsible for the defence of France on all fronts, including her overseas territories. Facing Germany and Belgium—and at this stage of the war naturally containing the bulk of the French army—was the 'North-East Front' under General Georges. Gamelin had his headquarters at Vincennes on the outskirts of Paris; Georges was located at La Ferté-sous-Jouarre, about 40 miles east of the capital. A single staff located at Montry, over 20 miles east of Vincennes and about the same distance south-west of La Ferté, was intended to

serve them both; the Chief-of-Staff, General Doumenc, made valiant attempts to divide his time between his two masters.

The C-in-C of the French air force, General Vuillemin, had his headquarters at yet another place, Coulommiers, with an 'Officer Commanding the Air Co-operation Forces' alongside the C-in-C of the 'North-East Front'. The whole area was divided into 'zones of air operations' corresponding to the boundaries of army groups, an arrangement which should theoretically have worked well but in practice meant that the French air force was never used in concentration, and air units frequently received contradictory orders from central headquarters and the 'Air Observation Groups' attached to the armies.

Directly subordinate to General Georges

along the north-east and eastern frontiers of France were, from north to south:

● **The French 7th Army (Giraud)**—from the North Sea to Bailleul. It consisted of seven élite French divisions, including two motorised infantry and one light mechanised.

● **The BEF (Gort)**—from Bailleul to Maulde north-east of Douai. On May 9 it comprised nine infantry divisions, one division (51st Highland) having been detached to the Saar front. As already mentioned, the C-in-C of the BEF, although under command of the North-East Front, retained a certain measure of independence. His directive included the following statement: 'If any order given by him (C-in-C, North-East Front) appears to you to imperil the British Field Force it is agreed between the British and French

GERMAN

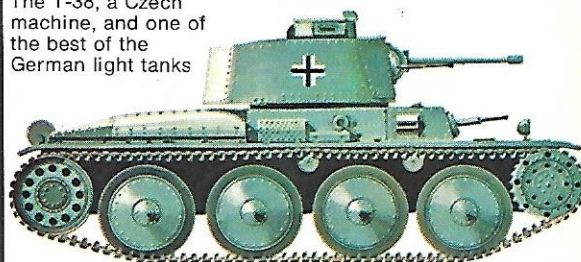
The Pzkw
(Panzerkampfwagen)
Mark IV,
packing a
75-mm turret gun,
but with no
heavier armour
than the Mark III
cruiser tank



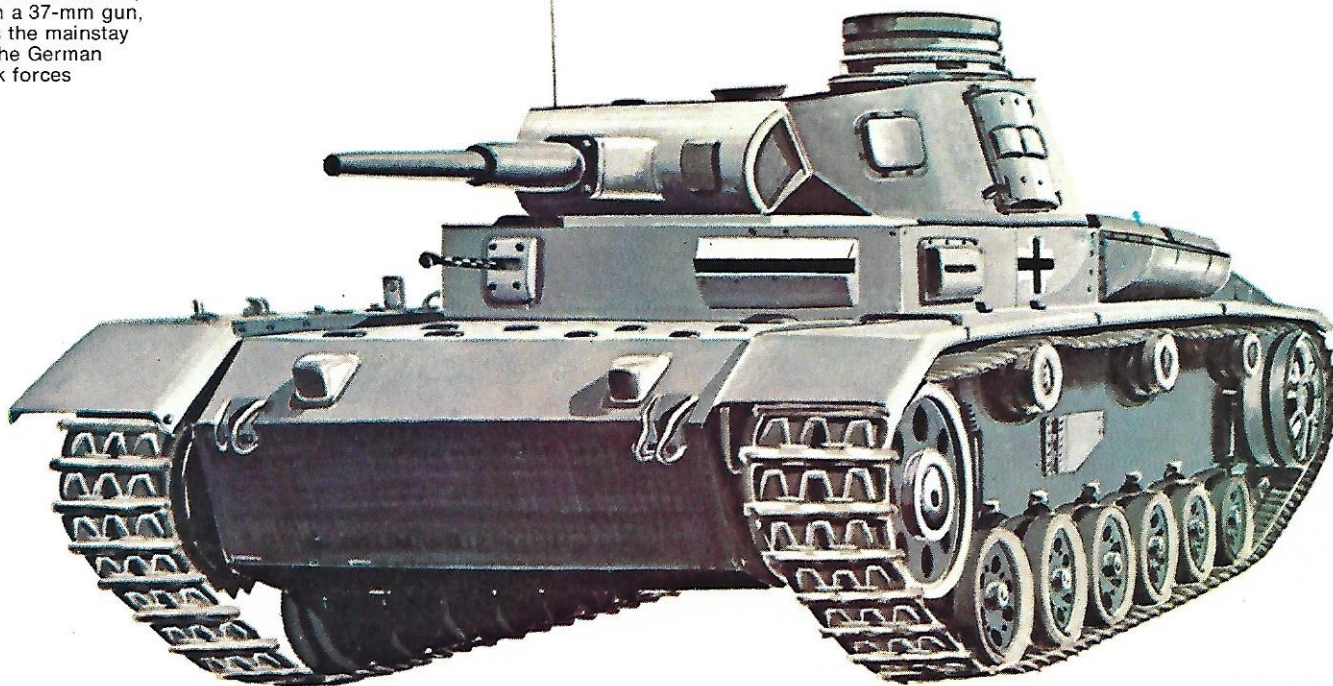
Pzkw Mark II, a
light, fast scout
with a 20-mm
turret gun



The T-38, a Czech
machine, and one of
the best of the
German light tanks



The Pzkw Mark III,
with a 37-mm gun,
was the mainstay
of the German
tank forces



Governments that you should be at liberty to appeal to the British Government before executing that order.' The British Air Forces in France (BAFF), while intended to give the BEF 'full assurance' regarding air support, were also required to operate 'in accordance with the day-to-day needs of the Allied situation on the western front as a whole'.

● **French Army Group 1 (Billotte)**—from Maulde to the western end of the Maginot Line proper, opposite the south-west corner of Luxembourg. It consisted of three armies:

1st Army (four infantry divisions, two light mechanised divisions, two motorised infantry divisions);

9th Army (five infantry divisions, one motorised infantry division, two cavalry divisions);

2nd Army (five infantry divisions, two cavalry divisions).

● **French Army Group 2 (Prételat)**—holding the Maginot Line from Longuyon to Basel. This consisted of four armies totalling, with the fortress troops, some 43 divisions. Except for one cavalry division on the Luxembourg frontier, it had no mobile formations.

The French general reserve consisted of 22 divisions, including all three armoured divisions, and two motorised infantry divisions. Of this total, however, seven divisions, including two armoured, were ear-marked for immediate allocation to Army Group 1 in the event of any German move through Belgium and Holland; five more divisions were ear-marked to guard against a possible German outflanking move through Switzerland. The true French reserve therefore consisted only of some ten divisions, including one armoured.

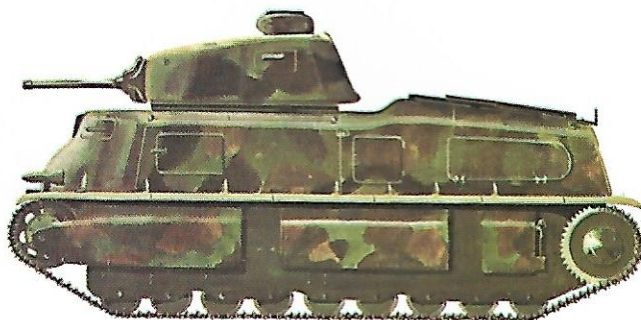
The arresting point about the Franco-British dispositions was the high proportion of the available forces allotted to the southern sector, already heavily protected by the Maginot Line. A total of 104 divisions was available, and of these 43 were in or behind the Maginot Line, while—even including the earmark from general reserve—there were only 46 divisions in the north-west sector. Admittedly that sector included the majority of the available armoured and mobile formations, but nevertheless comparison between the two sides is striking: on the German side the whole weight of the army was concentrated in the northern half of the front, leaving the southern sector defended only by a thin screen; on the Allied side, the forces were more or less evenly distributed along the entire length of the front, in accordance with the French theory of the

FRENCH

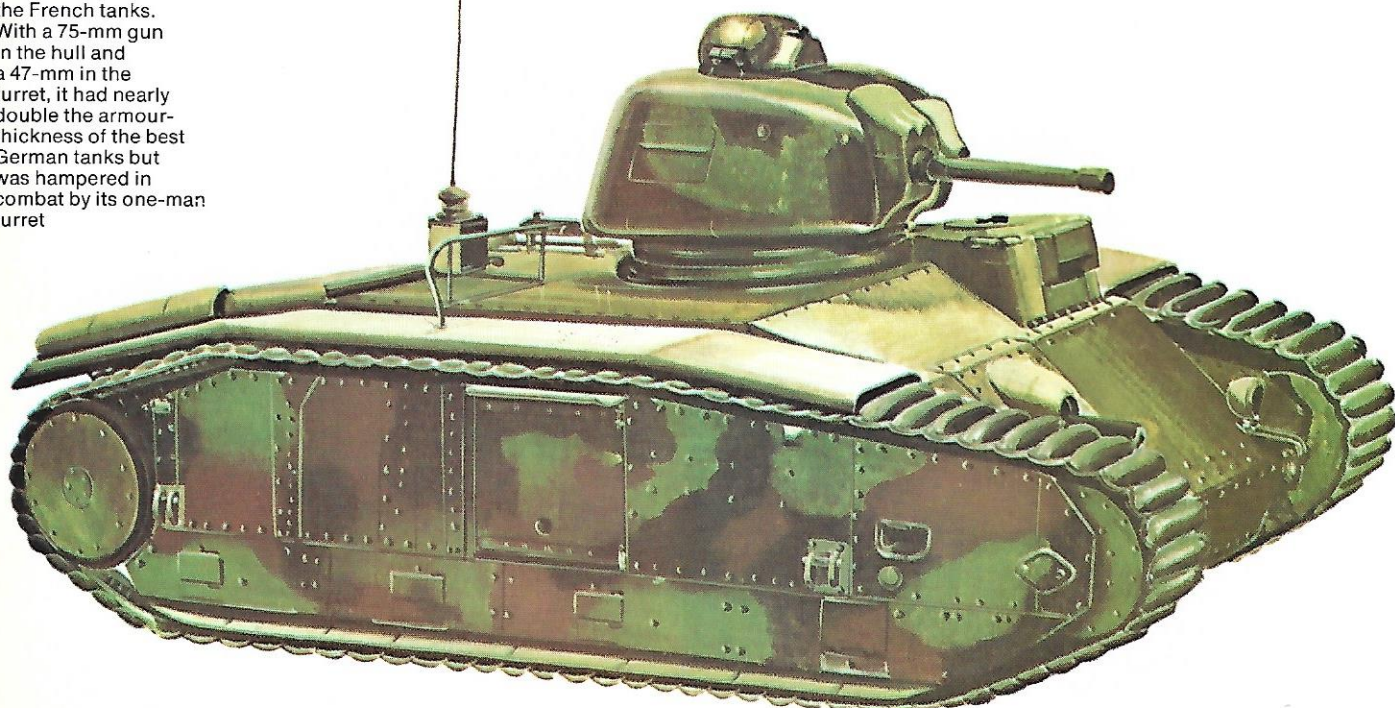
The H-39—the 'char d'assaut' of the armoured cavalry divisions



The S-35 was armed with a 47-mm turret gun and was fast for its 20 tons



'Char B'—best of the French tanks. With a 75-mm gun in the hull and a 47-mm in the turret, it had nearly double the armour-thickness of the best German tanks but was hampered in combat by its one-man turret

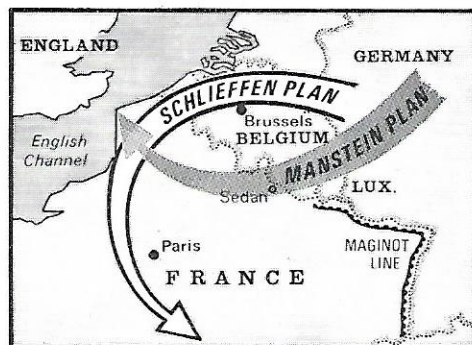


continuous line. Moreover, the Germans kept a large reserve (42 divisions), the Allies a small one, half of which was already earmarked.

The distribution of forces within the Franco-British north-west sector also deserves consideration. Four French armies and the BEF stood ready along this 200 miles of frontier, but their strength was not evenly distributed. In the north-west half of the sector were three armies (French 7th Army, BEF, French 1st Army) with 24 divisions, including the vast majority of the armoured and motorised formations. Opposite south-east Belgium and western Luxembourg were two armies totalling only 15 divisions. This was in fact the weakest point of the entire Franco-British front.

Beyond the frontier along which stood the Franco-British left wing, the Belgian army was manning its defences. King Léopold was its C-in-C; he took his advice from his military adviser, General van Overstraeten, rather than from his General Staff. The main line of defence was the Albert Canal, running northwest from Liège to Antwerp; south of Liège the defence was based on the Meuse, westwards to Namur and thence south to the French frontier. Liège, which was heavily fortified, therefore constituted the linchpin of the entire system. Five corps comprising a total of 12 divisions were on the line of the Albert Canal; one corps of two divisions was responsible for the defence of Liège; a further corps of two divisions, including one *Chasseurs Ardennais* division, held the bridges over the Meuse from Liège to the French frontier, while one cavalry division and a second *Chasseurs Ardennais* division were located in the Ardennes. Four divisions were in reserve in the interior of Belgium.

Further north, the 11 divisions of the



Dutch army were prepared to defend as much of the country as they could. In practice this meant only the western half of Holland from the southernmost point of the IJsselmeer southwards. The main defensive position, known as the Grebbe Line, ran southwards from the IJsselmeer to the Neder Rijn passing east of Utrecht. It was defended by two army corps consisting of four divisions. South of the major obstacles of the Neder Rijn and Waal rivers and linked to the Grebbe Line by two independent brigades was a further defensive position based on the Peel marshes and the River Raam, running parallel to and some 20 miles west of the Dutch-German frontier. It was held by a corps of two divisions plus the Light Division. In reserve in the interior of the country was a further corps of two divisions. The rest of the army was scattered in independent battalions and brigades, primarily for frontier duties.

For the Dutch and Belgian armies, plans were comparatively simple. In spite of their insistence upon neutrality it was perfectly clear that the only aggressor they had to fear was Germany. Their object was simply to continue to exist until help could reach them from the British and French, meanwhile holding the German attack as far to the east as possible. Neither was under any great illusions about their ability to do this, and both visualised the necessity for withdrawal from their initial defence lines.

From the Dutch point of view the Grebbe and Peel-Raam Lines were little more than advanced positions for the defence of 'Fortress Holland', the core of the country containing the cities of Amsterdam, Rotterdam, and The Hague. The defences of Fortress Holland ran from Muiden on the IJsselmeer a few miles east of Amsterdam, south to the Waal at Gorinchem, and thence along the Waal to the sea west of Dordrecht.

The Dutch and Belgians plan to withdraw

The Dutch reserve divisions were located within the fortress. The Dutch plan visualised the forces holding the Grebbe Line falling back, when necessary, to hold the eastern face of Fortress Holland, and those holding the Peel-Raam Line to the southern face. Fortress Holland was then to be defended to the end, supplied, it was hoped, by sea—for the withdrawal of the Dutch right flank inevitably implied severance of all land contact with the Allies to the south.

The Belgians also visualised the possibility that they might not be able to hold the line of the Albert Canal and the Meuse until the arrival of the French and British. They had therefore made provision for the defence of the River Dyle. This, running from Antwerp via Louvain and Wavre to the Meuse at Namur, at least had the advantage of covering Brussels and the western half of the country. There seemed good reason to hope that the French and British would be able to reach the Dyle and the southern Meuse before the Germans, and there constitute a solid defensive front. Unfortunately Belgian neutrality had prevented any prior co-ordination of plans or allocation of sectors between the three nations. Comparatively little was known at French and British headquarters regarding the strength and state of the Dyle defences.

The Franco-British plan was based on the assumption that the German manoeuvre would be a wider and more ambitious version of the Schlieffen Plan of 1914—in other words, that the Germans would attempt to envelop the left flank of the Maginot Line by swinging their right forward through southern Holland and Belgium. It was anticipated that the main weight of the German offensive would come through central Belgium on the general line Liège-Brussels-Ostend and would then swing southwards to roll up the Allied left flank. To meet this expected German move, the Allied plan was to swing their left forward to support the Belgians on the Dyle and Meuse, at the same time dispatching a force into southern Holland to gain contact with the defences of Fortress Holland.

In detail, and working from south to north, the plans were as follows: the French

9th Army, pivoting on its right, was to move up to the Meuse from the frontier to Namur; the French 1st Army was to swing eastwards to cover the gap between the Meuse and the Dyle between Namur and Wavre; the BEF was to move up to the Dyle from Wavre to a few miles north of Louvain, whence it was hoped that the Belgian army would prolong the line to Antwerp. On the extreme left the French 7th Army was to move to the Breda area to cover the gap between Antwerp and the southern defences of Fortress Holland. It will be remembered that as soon as this move was ordered the French left flank was to be reinforced by seven divisions from the general reserve, including two armoured divisions.

To provide for the possibility of Belgian resistance lasting either longer or shorter than anticipated, contingency plans were prepared to move on to the line of the Albert Canal should the Belgians still be holding out there, or alternatively to meet the Germans on the line of the Escaut river (Maulde-Ghent-Antwerp) should it prove impossible to reach the Dyle.

Meanwhile, the 2nd Army, the right-hand army of French Army Group 1, and the whole of French Army Group 2, were to remain on the defensive in the frontier defences and the Maginot Line.

It will be noted that although this plan visualised a forward move by the whole of the Allied left wing, its concept was basically defensive. The object of the move into Belgium and Holland was less to act offensively against the enemy than to establish a defensive front in co-operation with the Belgians and Dutch, thereby gaining for the Allied side the potential represented by those two armies, preserving as large as possible a part of their territory from invasion, and holding the enemy away from the North Sea ports. Only when the enemy had exhausted himself by battering his head against these defences was it proposed to take the offensive. But there had been no detailed planning as to how or where this offensive would take place.

Armoured mobility was the pillar of German strategy

The German plan had initially been almost exactly that which the Allies anticipated. The first version of 'Plan Yellow', dated October 1939, gave Bock's Army Group B in the north three armies and eight of the ten armoured divisions. The plan was to make good the area Antwerp-Brussels-Namur, and then thrust to the sea from Ostend southwards. The main weight of armour was to be on the outer (northern) flank in order to envelop the Allied left. Rundstedt, with two armies in Army Group A, was to protect Bock's left.

In February, however, influenced perhaps by the fact that the plan had become known to the Allies through the forced landing of a German aircraft in Belgium in January, Hitler agreed to a radical change which had long been urged to Rundstedt by his Chief-of-Staff, von Manstein. The roles of Army Groups A and B were in fact reversed; the main attack was now to be made by Rundstedt with Army Group A; Bock was to protect his right flank and draw the French and British left wing forward into Belgium and

Military Balance (continued)

southern Holland. The aim of the new plan was far more ambitious—to pierce the Allied front from the Meuse between Sedan and Namur and drive straight through to the sea at Abbeville, thus encircling the French 1st Army, the BEF, and the French 7th Army.

For this purpose one army (IV) was transferred from Army Group B to Army Group A, and Rundstedt was given seven of the ten armoured divisions. The parachute force was allotted to Bock to seize the crossings over the major obstacles in Belgium and Holland.

It was a bold concept. Not only did it mean pushing the main body of the armoured formations through the reputedly difficult country of the Belgian Ardennes and Luxembourg, but it also depended upon a rapid forcing of the Meuse crossings. Even if that succeeded, the left flank of the armoured drive westwards to the mouth of the Somme was inevitably vulnerable to a counter-stroke from the south by the reserves which the Germans had to assume the French would retain.

Success depended upon a rapid breakthrough by the armoured forces and the confusion and disorder which so deep an advance into the interior of France and Belgium would spread—in other words, upon mobility and bold leadership, the other two pillars of German strategy. Fortunately this plan had one further major advantage: the main weight of the attack would fall upon the weakest point of the entire Allied line, the Meuse south of Namur and the hinge of the moving Allied left wing. The area was held by only two weak French armies (the 2nd and the 9th), and they contained a high proportion of reserve divisions.

With certain significant exceptions, in none of the five nations involved did men go to war with any enthusiasm in September 1939. A high proportion of all the armies consisted of reservists recalled to service and in general terms all of them, including the Germans, had reported for duty, resigned but with little taste for the job. The quality of the forces available to the two sides depended to a considerable degree upon the use to which the period September 1939 to May 1940, the 'Phoney War', had been put.

The French regular army contained good material and the regular divisions were well equipped and trained for the roles which French theory foresaw for them; even here, however, the deadening influence of the military bureaucracy and routine of the inter-war years had made itself felt. Somehow the spark was not there.

The French reserve divisions, particularly those of Series B—the second-class garrison troops—left much to be desired. Moreover, they had hardly made the best use of the Phoney War period. Apart from a rather half-hearted offensive on the Saar front in September, the French army had been employed primarily on constructing additional frontier defences. Moreover, the long period of waiting, combined with the fact that, though away from their homes they were still in their own country and when off duty could lead a semi-normal peace-time existence, had contributed to a slackening of discipline and a lowering of morale.

Nevertheless, despite these signs of disintegration below the surface, the French army of 1940, heavily armed and equipped as it was and led by men generally con-

sidered at the time as some of the finest military brains in Europe, represented a formidable fighting force.

The Belgians and Dutch, as neutrals and in any case junior partners, clearly could not view the forthcoming struggle with anything other than apprehension. Their men were doggedly determined to defend as much of their country as they could, but in general, neither army could be considered a modern fighting force. They had spent the winter strengthening their defence and preparing their inundations. They would fight as best they might but their leadership, particularly in the case of the Dutch, was antiquated and their standard of training at best moderate.



MAJOR-GENERAL R. H. BARRY, CB, CBE, was born in 1908 and educated at Winchester and Sandhurst. He was commissioned into the Somerset Light Infantry, attended the Staff College in 1938, and went to France with the British Expeditionary Force in 1939, in the Intelligence section of GHQ. At the end of 1940 he was posted as Operations Officer to Special Operations Executive, where he remained until June 1942; after a short period of regimental service, he then went to Allied Force Headquarters, Algiers. Since the war he has held various appointments in Europe, America and Egypt. He retired from the army in 1962. Major-General Barry has translated several military works into English, including the German General Warlimont's book *Inside Hitler's Headquarters* and the books of the French General Beaufre on military strategy.

The British force, though small, was of good quality. The British soldier, both regular and territorial, had gone to war with his traditional determination to do his duty in a cause he felt to be right. The German Intelligence estimate in fact read: 'The regular divisions will fight bravely. Their resilience in face of losses and reverses must be rated high'—and by May 1940 this estimate was applicable to the BEF as a whole, for some good use had been made of the winter respite despite the quite atrocious weather. Much time had been taken up in the construction of defences—soon to be emended—and a strenuous training programme had been carried out with the territorial divisions, which, assisted by certain unit exchanges with the regular divisions, had become good-quality fighting material.

The German reservist had not gone to war with any more enthusiasm than the rest. A popular picture of the German army of May 1940 is of an almost perfect war machine, superbly equipped and trained, and composed of Germans thirsting for battle.

This picture is perhaps not far wide of the mark as regards the German regular divisions, particularly the armoured and motorised formations. They were well equipped, highly trained, and had proved the success of their methods and the efficiency of their equipment against the Poles. In so far as there was any enthusiasm for the forthcoming contest on any side, it was to be found in the German regular forces; but they accounted for only 52 of the 136 German divisions on the western front.

The Germans had made better use of the winter training period to improve the quality of their reserve divisions than had the

French, but even so, these *Ersatz* ('Replacement') and *Landwehr* ('Territorial Reserve') divisions, though reasonably well equipped, were not at a high level of efficiency and their men had no wish to launch forth into what was clearly about to become the Second World War in the full sense of the word.

The most striking commentary upon the French commanders is the fact that of all those in high places on May 9, 1940, hardly a name is remembered. General Giraud, commanding the French 7th Army, later emerged briefly as a potential leader, only to disappear again. Colonel de Gaulle was commanding a partially formed armoured division, and General de Latre de Tassigny (who later played an important role in the Free French campaigns) an infantry division. But the senior commanders—Gamelin, C-in-C of all French land forces; Georges, C-in-C of the North-East Front; Billotte, commanding French Army Group 1; and Pretelat, commanding French Army Group 2—have disappeared from history almost without trace (Billotte was killed in a car accident in May 1940).

The French commanders had become immersed in bureaucratic military detail. The spark was lacking. They faced the forthcoming contest with their hereditary enemy neither with apprehension nor enthusiasm, but with calm, somewhat negative complacency born of their certainty of the inherent superiority of French military system and theory.

The German estimate of the British commanders was that they were 'stereotyped and slow . . . at the higher levels there is an unmistakable aversion to taking bold decisions'. There was truth in this appreciation, but nevertheless there was a leavening in senior positions to whom it did not apply—2nd British Corps was commanded by Lieutenant-General Brooke, later Field-Marshal Lord Alanbrooke, 1st Division by Major-General Alexander, 3rd Division by Major-General Montgomery, and 50th Division by Major-General Martel. Though here and there doubts were expressed as to whether the French army was quite the superb instrument of war it was generally said to be, the British commanders comforted themselves with the thought that the French would 'fight all right on the day'. So far as they themselves were concerned, they were quietly confident in their ability to give a good account of themselves against all comers.

The German commanders were by no means all eager for battle. Technically they were highly competent, and they included men like Guderian, Reinhardt, Hoth, Kleist, and Rommel, who were enthusiasts for their particular brand of warfare—the use of massed armour. The Luftwaffe, under the guidance of Göring, contained a proportion of ruthless fanatics.

But the older level of German commanders viewed Hitler's extension of the war with apprehension. When, in the autumn of 1939, it became known that Hitler was planning to attack in the west, the senior commanders—almost without exception—had been aghast at the idea. Brauchitsch, the C-in-C of the army, and Halder, his Chief-of-Staff, had done their utmost to dissuade Hitler—and they had been supported by Bock, Leeb, and Rundstedt, now the three army group commanders. But Brauchitsch was a weak man and Hitler had borne them all down.

On May 9, 1940, they were ready to go, but with a nagging doubt as to the wisdom of the adventure.

The effects of the differences in doctrine between the two sides can therefore be traced throughout. The Allies relied upon their fortifications and a great weight of material, particularly in artillery and heavily armoured tanks working closely with infantry. Their initial plan was basically defensive and their forces were distributed more or less evenly all along the front in accordance with the theory of the continuous line. The high command was slow and somewhat unimaginative in its thinking.

The Germans staked everything on the success of the methods which had brought them victory in Poland—a concentrated

blow at a single point followed by deep, highly mobile exploitation by massed armour with close air support. Commanders were ready to take considerable risks.

Their plan was a bold one, for only a comparatively small proportion of their army was capable of acting according to the new concept, and the rest had neither the equipment nor the spirit. Should the initial blow fail or the enemy react quickly and intelligently, the risk they ran was great.

In terms of the mediaeval tournament: at one end of the lists on May 9, 1940, sat the old knight, a little soft perhaps from good living, but rich in experience, mounted on a vast and ponderous war horse, encased in the thickest of armour—including a shield of unheard-of strength—and wielding a

heavy battle-axe. At the other end of the lists was the young upstart, less heavily armoured, mounted on a lighter, more manoeuvrable charger, and relying for victory upon a lance, the point of which had been sharpened and hardened by a new process. But should his lance fail to avoid his opponent's shield, fail to penetrate his armour—or still worse be broken in the process—he would be borne down by the weight of his adversary.

True to his nature Hitler was gambling. He was gambling on a quick victory achieved by 200,000 fit, strong, highly trained, and well-equipped young men in his armoured and motorised formations, supported by some 3,000 other young men piloting the most modern types of aircraft.

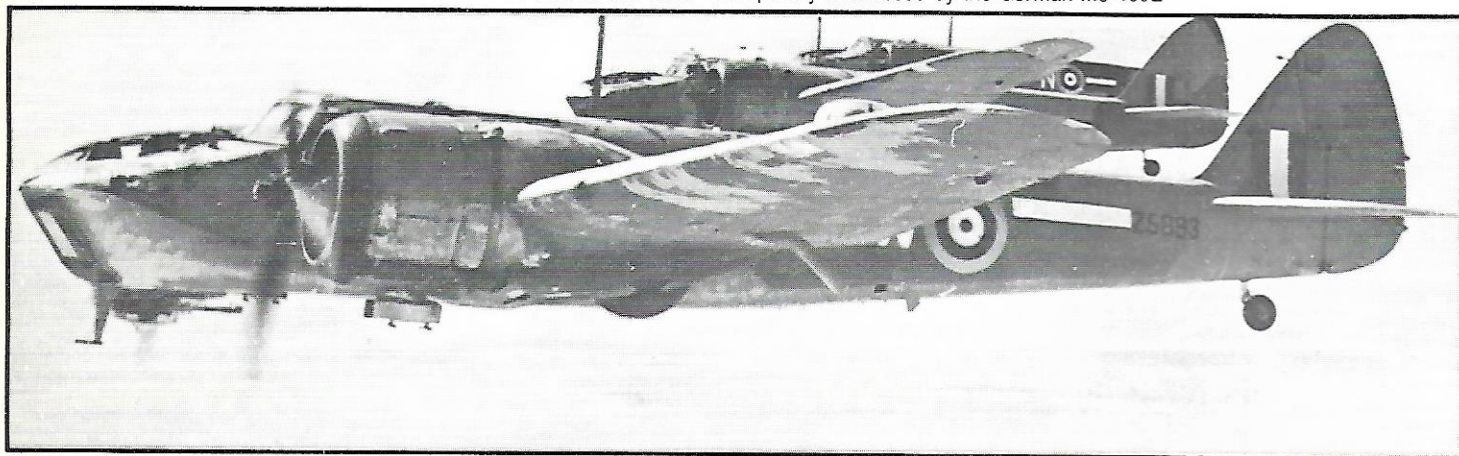


The Balance in the Air

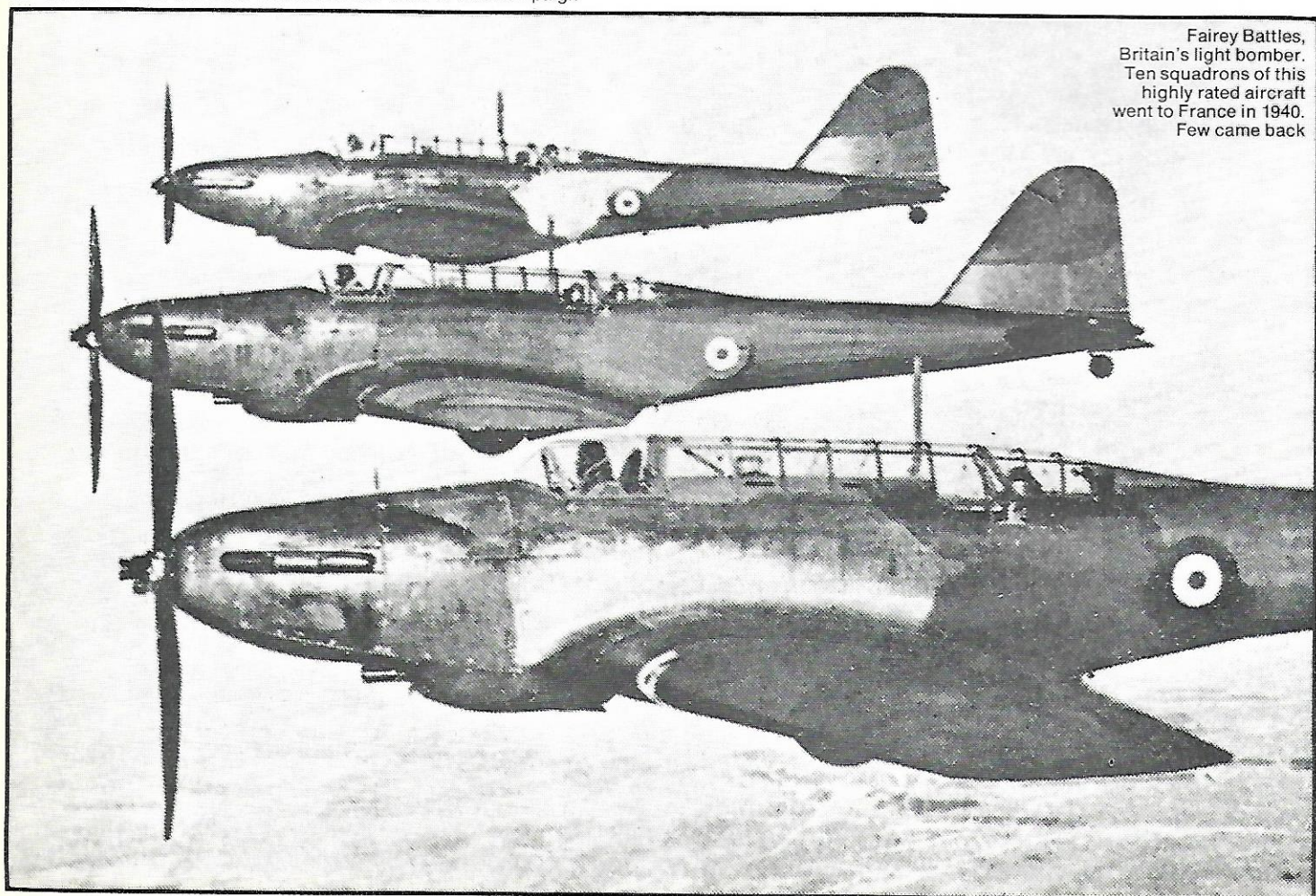
The Germans had a numerical superiority of two to one, and in almost every department German aircraft were technically superior to their Allied counterparts



△ French MS-406's—completely outclassed by the German Me-109E



△ Blenheims—the standard British bomber used in this campaign



Fairey Battles,
Britain's light bomber.
Ten squadrons of this
highly rated aircraft
went to France in 1940.
Few came back



△ The Spitfire (which came later) and the Hurricane (top)



△ The German Stuka dive-bomber

AIR STRENGTH: May 1940

FRENCH

FIGHTERS single and twin seat
(Morane M.S.406, Bloch M.B.151, Dewoitine D.520, Potez 631)

○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ 700

BOMBERS

○○○○(150-175)

RECONNAISSANCE

○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ 350-400

BRITISH AIR FORCE IN FRANCE*

FIGHTERS (Blenheim, Gladiator, Hurricane)

○○○○ 130

BOMBERS (Battle, Blenheim)

○○○○○○○○(220)

ARMY CO-OPERATION (Lysander)

○○ 50

GERMAN

FIGHTERS (Me 109, Me 110)

+++++ 1000

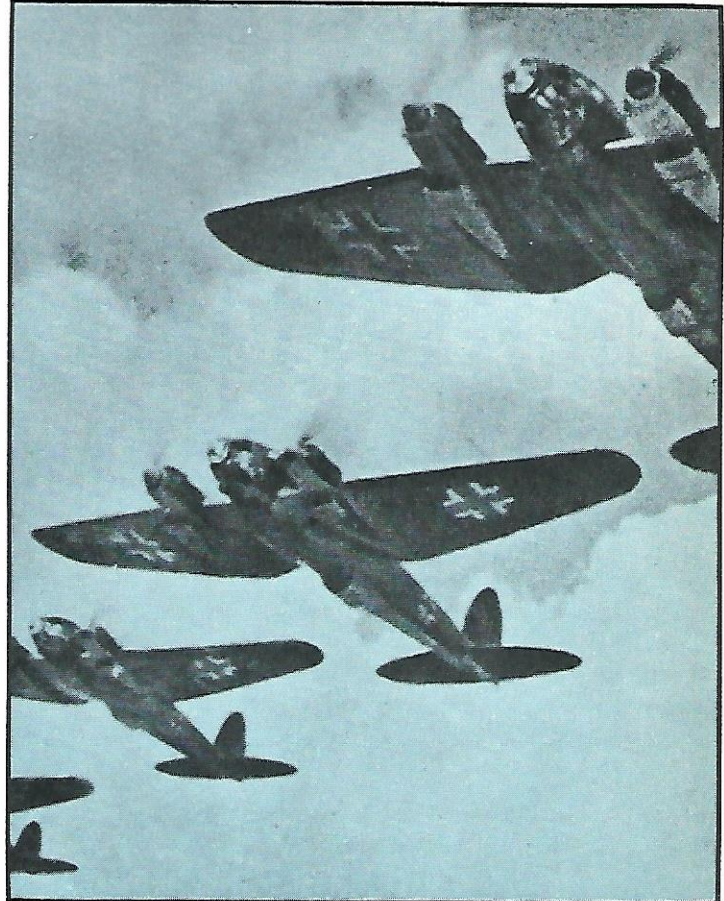
BOMBERS (He 111, Ju 87, Ju 88, Dornier)

+++++ 1800

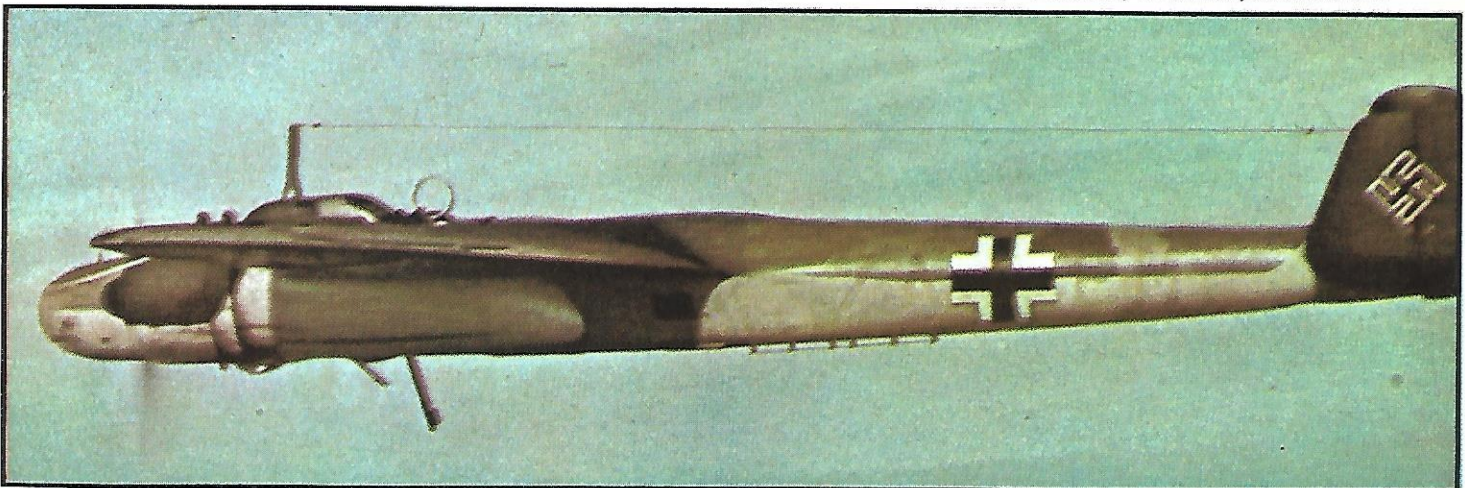
SCOUT PLANES

+++++ 400

*Not including planes based in Britain and used in France



△ Heinkel 111's—by 1940, the mainstay of Germany's bomber arm



△ Tested during the Spanish Civil War, the Dornier 'Flying Pencil' took part in the terror bombing of Guernica

Belgium May 10, 1940

Coup from the air: the capture of Fort Eben-Emael

Oberst Rudolf Witzig

In the early morning of May 10, 1940, Germany invaded the Low Countries. One of the Wehrmacht's first and most decisive blows was the capture of Fort Eben-Emael, reputed to be the strongest fort in the world. No one had even suspected that gliders would be used to take the fort, but on the other hand the potential of glider troops and paratroops was well known. It would have been wise—and indeed simple—to place obstacles atop the fort to impede or prevent this type of landing. And although orders had in fact been issued to this end, they were still awaiting execution when the enemy struck. The story of this brilliant German success is told by the man who commanded the glider-borne contingent that achieved it



[All action photos are cuts from a German film made on the spot]



As the northernmost fortification of Liège, Eben-Emael held a dominant position, commanding the Albert Canal, the roads leading from Maastricht to the west, and, above all, the vitally important high bridges over the canal at Vroenhaven and Veltwezelt. The fortifications were built between 1932 and 1935 and abutted the canal on the western bank of the enormous canal-cutting at Caster.

Extending some 700 metres from east to west and 900 metres north to south, the fortifications were a tight complex of artillery and infantry installations, co-ordinated to provide mutual cover, and with carefully constructed exterior defences on all sides. On the north-east side, a steep slope descended the cutting 40 metres to the Albert Canal, providing complete security. On the north-west side, the flood plain of the River Jeker had been raised by the fortifications and, in addition, extra security had been attained by digging a trench with steep embankments. In the west and south, where the surrounding countryside is more or less on the same level, the fortifications were protected by wide trenches and by walls at least 4 metres high.

All individual installations, including those extending to the south, were linked by a system of tunnels many kilometres long, with access only through the entrance of Fort 17. The installation included a barracks with sick bay and rooms for machines, troops, officers, staff, and stores. It had radio and telephone communications and an elaborately constructed ventilation system with protective filters.

In 1940 the rapid breakthrough by the German VI Army between Roermund and Liège depended on overcoming these frontier obstructions at the onset. For this reason, it was just as necessary to take the Albert Canal bridges, undamaged, as to put Eben-Emael out of action. In view of the preparations of the Belgian army, however, neither of these aims could have been achieved by orthodox methods of warfare, even using parachute troops. So the German command decided to use freight gliders, which could approach silently and invisibly in the half-light and which would, moreover, possess a high 'surprise potential', as they had never before been used on such a scale as a weapon of war.

In order to achieve this surprise, it was essential for the gliders to land at the same time as the German army first crossed the frontier. Thus the army had, in fact, to time its attack to suit our requirements, and only reluctantly did it grant this priority to an unfamiliar and untried weapon.

For one thing, the failure of the whole mission could be brought about by heavy losses during take-off, flight, landing, and particularly during the critical period when the airborne force was within range of enemy infantry weapons. This critical period could, however, be reduced by means of nose-dive brakes, parachute-brakes, and landing spurs. Moreover, with its minimum gliding angle of 1:12 at a towing height of 2,000 metres, the freight glider could be released 20 kilometres from its objective and an experienced pilot could make a spot landing within a radius of 20 metres. This meant that we could approach noiselessly and, moreover, in the dark.

Continued on page 109



'All troops attacked as soon as they disembarked'



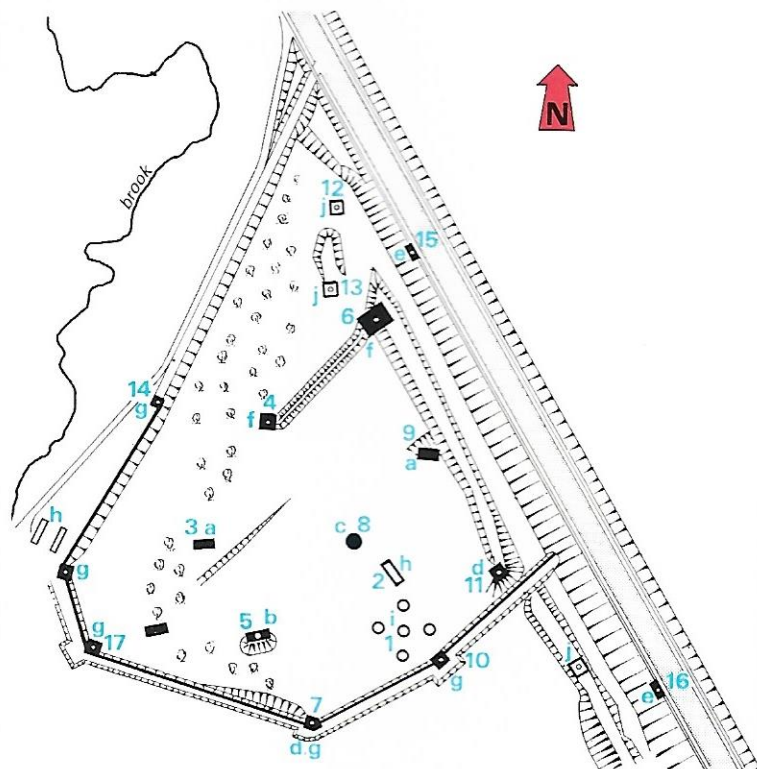
'First, we were to destroy all infantry weapons'



'In the north, sappers had to use their flame-throwers'.

THE PLAN OF FORT EBEN-EMAEL

First ever target for an attack by airborne sappers



PLAN OF FORT EBEN-EMAEL

Types of installation

- a Turrets with three 7.5-cm cannons (Turrets 9 and 26 face north; turret 12 faces south)
- b Same as "a", but with an observation dome that faces north
- c 12-cm revolving twin cannon
- d 7.5-cm twin cannon, revolving and retractable
- e Canal sector with rapid-fire cannons, machine-guns, and searchlights
- f Fort with machine-guns, searchlights, and observation dome
- g Line of trenches with anti-tank cannons, machine-guns and searchlights
- h Barracks
- i Anti-aircraft machine-gun position
- j Dummy positions

For numbered installations, see article

0 Yards 500

For the spot landing proper, however, a shooting light was required. Once landed, the group could then start its assault fully armed and with closed ranks.

The mission of capturing Eben-Emael and the Albert Canal bridges was entrusted to the Koch Storm Detachment, formed at Hildesheim in November 1939 under the command of Captain Koch. This unit comprised the I Company of the I Parachute Regiment, the Parachute Sapper Detachment of the VII Flying Division (at that time the only German parachute division), the Freight Glider Unit, a beacon and searchlight detachment, and an airfield ground staff. To these was added a towing unit of Ju 52s. The parachute company was responsible for the capture of the three bridges: Vroenhaven, Veltwezelt, and a less important one at Canne, about 1 kilometre north-west of the fort.

It was to the sapper detachment (under my command) that the attack on the fortress of Eben-Emael was entrusted. We were the only parachute unit composed entirely of sappers, and all were volunteers. Among us were the best amateur glider pilots from pre-war days when Germans already excelled in the sport of gliding; and during the two years of the unit's existence, it had grown into a sturdy, close-knit community in which each man had confidence in his fellows.

For six months, top priority had been given to this operation. Security was vital, since our success—indeed, our survival—depended on taking the enemy by surprise. We were all made aware of this, and drastic measures sometimes had to be taken; our training and details of equipment, tactics, and objective had to be kept completely secret, and even among ourselves the name of the fortress was not generally known until after its capture. No leave was granted, nor were we allowed out, or to mix with men from other units. The sapper detachment was constantly moved around under different code names, and all parachute insignia and uniforms were left behind. Even glider practice in the Hildesheim area was carried out on the smallest possible scale; the gliders were then dismantled, moved to Köln in furniture vans, and re-assembled in hangars surrounded by wire entanglements guarded by our own men.

We were allocated 11 gliders for the job, and as the plan of campaign developed, it became necessary to divide the detachment into 11 sections of seven or eight men. Each section was to capture two emplacements or casemates and, in addition, to be equally ready to take over for any section out of action. Moreover, unlike other pilots, a glider pilot, who is in command up to the time of landing, cannot stand aside during the actual battle. So our pilots took their turn as sappers in the detachment and the section to which they were allocated, so that they would be reliable in action.

After the fullest use had been made of the training facilities in Hildesheim, the detachment practised attacking strongly defended fortifications in the Sudetenland, and also carried out trial demolitions at Polish installations near Gleiwitz. Lectures at the sapper school at Karlshorst introduced us to the principles of fortress construction. Finally, deserters from Belgian fortifications

were interrogated, and we were able to check what we had been learning against the information they supplied. Thus the picture became complete, and the sappers acquired confidence in their weapon: none of us would have changed places with anyone, not even with men in armoured forts.

X-Day was several times postponed, but our time was fully occupied in practising new techniques—such as pin-point landing with explosives on the airstrip and in the open country, or rapid disembarkation when fully armed. In addition to flame-throwers and the collapsible assault ladders which we had built ourselves, the special equipment for the operation consisted chiefly of 2½ tons of explosives, predominantly cavity charges, which were used for the first time at Eben-Emael for cracking the armoured domes.

The 50-kg cavity charges, carried in two parts, were in the shape of hemispheres. They could penetrate armoured domes 25 cm thick, and even where this armour was 28 cm thick, it was likely that weapons and troops below would be put out of action by flying splinters. Where the armour was thicker still, several explosions in the same

'A final stroke of ingenuity'

hole would be necessary. Even the smaller 12.5-kg cavity charge penetrated armour of 12 to 15 cm, and it was also suitable for precision blasting of loop-holes and heavy artillery. All charges were detonated by ten-second fuses.

The rest of the storm detachment carried the usual arms: six light machine-guns, sub-machine guns, hand-grenades, pistols, smoke bombs, entrenching tools, and a radio. A final stroke of ingenuity, characteristic of our thorough preparation, was the plan to drop by parachute several groups of uniformed dummies behind the Albert Canal to the west. As we had guessed, this caused considerable confusion to the Belgian command.

After half a year of strict isolation, the alert in the afternoon of May 9 came as a relief. The Koch Storm Detachment met according to plan at the airfields of Köln-Ostheim and Köln-Butzweilerhof, some of them being brought in by the towing unit. At night the towing craft were brought to the runway, loaded, and the places occupied. Take-off was at 0430 hours precisely; this had been calculated to allow our four storm groups to land simultaneously, at 0525 hours, at the bridges and at Eben-Emael—five minutes before the army crossed the frontier. In complete darkness the aircraft took off from the two tiny airfields and started their journey through the night—a magnificent achievement. Height was gained by circling to the south, then we turned westwards, following a route which had earlier been marked with beacons.

In a light ground mist, through which the outlines of the fortification could be dimly perceived, nine gliders landed on Eben-Emael itself (two, including my own, having been lost during the flight). They had been met with anti-aircraft machine-gun fire as they approached, but then the sections attacked, as soon as they disembarked, under the command of Sergeant-Major

Wenzel, who took over until the arrival of the detachment commander.

We had all been thoroughly drilled in our tasks, and in the strict orders which our small number—85 men, including the pilots and allowing for no losses during the flight—made it imperative to observe. Our earlier study of aerial photographs and a relief model, made to scale on a sand table, had convinced us that our initial assault had to be restricted to the central installations. First, we were to destroy all infantry weapons and anti-aircraft guns firing in the open, and after that the artillery, particularly where directed to the north. Speed was essential, since anything not accomplished in the first 60 minutes would be made practically impossible later by the increasing strength of enemy defence.

Anti-aircraft Post 1 was captured immediately. The occupants of Hut 2 offered some resistance, but were soon silenced, and in the first ten minutes the sections successfully attacked nine occupied and defended installations (3, 4, 5, 6, 7, 8, 9, 10, 11), although Installation 7 later started firing from its sunken dome. Charges were placed on seven armoured domes and five exploded with complete success; nine 7.5-cm guns in three casemates were destroyed, and in Installation 8—a flat armoured dome 6 metres in diameter, which was not penetrated by the 50-kg cavity charge—two 12-cm cannon were effectively attacked by two 1-kg charges thrown into the barrels, jamming their breeches as they detonated.

Only seven sections with 55 men took part in this action, because two others had been sent to attack the northern area, which we had assumed would be particularly strongly fortified. As it happened, Installations 12 and 13 proved to be dummy works with tin domes of large diameter, so that the efforts of these two sections were wasted during those first decisive minutes. As a result, until the struggle on the surface area was over, we could only move under cover against fire from within the area of the southern corner. We came across no mines anywhere. The only installations protected by barbed wire were in the north, where the sappers had to free themselves with wire cutters and turn their flame-thrower on a machine-gun firing from an embrasure, before they could place their charges at Installation 4.

As I have mentioned, mine was one of the two sections lost during the flight, our tow-rope having broken just south of Köln, and we had landed in a field. I called up a reserve towing craft, and we hastily prepared the ground by cutting down willow hedges, but we could hardly have become airborne again without the nearly indestructible Ju 52 to tow us off. In due course I arrived at Eben-Emael, more than three hours late. The other section was not so fortunate; they were forced to land near Düren, where they joined the first ground troops advancing to the west. They crossed the Maas at Maastricht and eventually fought with the storm detachment on the western bank of the Albert Canal.

Our final task at Eben-Emael was to blow in the fortified entrances and press the attack into the depths of the fortress, holding all captured positions until relief arrived. During some hours of moderate fighting, we managed to reconnoitre the entrances and we penetrated the instal-

Continued

lations already captured, but then the Belgian artillery started to shell our positions and their infantry attacked us repeatedly over the north-western slope, which was covered with dense undergrowth. This situation forced us to defend ourselves in the north-western area, so that we only managed to remain in occupation of this part. Later we learned from Belgian sources that this was no counter-attack, but merely reconnoitring advances.

During that afternoon and night we detonated charges of up to 100-kg at the bottom of the ascent shafts, each about 40 metres deep, below Installations 3, 4, and 6, defended by barricades of rails and sandbags; in the narrow passages, the explosions had a devastating effect.

Meanwhile, the storm troops which had landed at Vroenhaven and Veltwezelt had successfully carried out their mission: the bridges were captured undamaged, small bridgeheads were established and, with the help of machine-gun detachments dropped later by parachute, were defended.

During the afternoon of May 10 these troops were relieved by infantry. The Belgians had blown up the Canne bridge in time. Here our paratroopers were engaged

A hard day of fighting

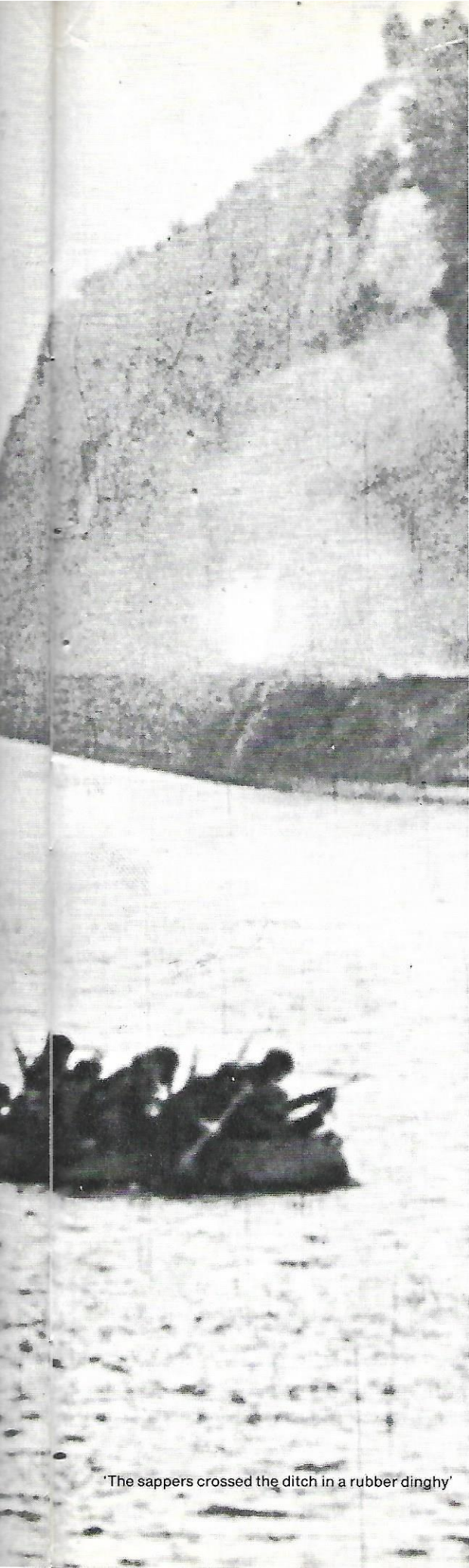
in a whole day of hard fighting, which prevented the 51st Sapper Battalion, detailed to relieve us, from crossing the canal. Their attempts to cross in rubber dinghies were made extremely difficult by the shooting from Emplacement 15, by the side of the canal—we could ourselves hear the gunfire far below us. Eventually, we managed to bring this emplacement under partial control by using hanging charges to block the look-out slits in the observation dome with smoke and dirt.

That night was uneventful. After the hard fighting during the day, the detachment lay, exhausted and parched, under scattered fire from Belgian artillery and infantry outside the fortification; every burst of fire might have signalled the beginning of the counterattack we expected, and our nerves were tense.

About 0700 hours on May 11 the advance section of the 51st Sapper Battalion at last arrived at the fortification, having crossed the ditch in front of Installation 14 in a rubber dinghy. Led by Sergeant Portsteffen, they silenced Ditch Emplacement 14, which we had twice attempted to blow up on May 10—and thus the way was open for the whole battalion to enter the fortification. Towards noon, more groups came up over the western edge, and the last Belgian installations—7, 15, and 16—ceased firing. The garrison had capitulated.

As we retired, after burying our dead and handing over 30 Belgian prisoners to the 51st Sapper Battalion, we saw scattered around the entrance installations the weapons of the garrison forces, who, with their commander, Major Jottrand, were taken away into captivity. According to a Belgian source, at the beginning of the attack there had been about 750 men present out of a regular force of 1,200; it seems that some





The Führer inspects his triumphant troops

15% were absent on leave and that others were quartered in nearby villages—many arrived later. They had lost 23 dead and 59 wounded. Of the 85 German sappers who had set out on May 10, six were killed and, apart from injuries caused by the hard landing, 15 were wounded.

The speedy capture of Eben-Emael, mentioned in barest outline in the army report, puzzled the press—particularly abroad, where they drew some fantastic conclusions. In 1941 an American magazine quoted a statement from a Dutch captain, according to whom workmen from German construction companies—which had helped to build the Albert Canal—had married local girls and remained in the country. For years, it was said, these Germans had been growing chicory in underground caves, taking the opportunity to pile up explosives under the fortress, which had therefore only to be detonated on the day of attack! Needless to say, the true circumstances—involving as they did new methods of combat and transport—remained a military secret for many years.

The real reasons for the capitulation of Eben-Emael seem to be as follows: although an attack was clearly not expected, our use of tactical and technical surprise made the destruction of the vital surface installations, artillery, and observation posts possible, and this in turn made the enemy uncertain about the general situation. Damage to the ascent shafts and ventilating system only increased their confusion; all help from outside, including the field artillery, failed. They felt trapped in their own fortress and their fighting spirit was stifled. Although defeated only in their surface positions, they were not prepared to make a counterattack in the open field, even before the fortress was surrounded; while they may have been trained only to fight under armed cover, this nevertheless reveals shortcomings. Certainly, an attack by night would have hurt us considerably.

The disposition of the fortification itself seems also to have been a disastrous mistake: defended trenches in front of the

casemates would have made entry into the gun embrasures much more difficult for us—but there were no such close defences, even for the heaviest guns. Moreover, the defenders should have had sufficient imagination to cover the surface with mines and wire entanglements. On the other hand, the two dummy Installations 12 and 13 were extremely effective in deceiving us, and the canal defences, which were immune to attack at close quarters, ensured for a long time the security of the canal cutting.

However, an examination of Belgian sources suggests that, in spite of all preparations, the Belgian soldiers did not believe in the war, and, furthermore, that what happened at Eben-Emael was typical of the whole 18-day campaign. Morale in Belgium had been weakened by neutralistic politics, and an ill-prepared army fought badly because it was badly led. For the most part it lacked the will to fight.

The storming of Eben-Emael was the first sapper attack ever made from the air. That it was successful is due to the efficiency and enthusiasm of the parachute sappers, using new weapons and new means of transport, aided by careful preparation, the participation of the Luftwaffe, and clear conditions of command.



OBERST (COLONEL) RUDOLF WITZIG was born in 1916 in Westphalia, and joined the Wehrmacht as a professional officer in 1935. In 1939 he was promoted First-Lieutenant and commander of the sapper detachment of the Parachute Infantry Battalion—in which role he took part in the attack on Fort Eben-Emael. After May 11, 1940, he was promoted to Captain, and in 1942 to Major in command of the Corps Parachute Sapper Battalion. In 1944, he commanded the XVIII Parachute Regiment. From 1945 to 1956 he studied civil engineering, and in 1956 he joined the re-established Bundeswehr as Lieutenant-Colonel. Oberst Witzig now commands the *Pionierschule*, near Munich.

'The sappers crossed the ditch in a rubber dinghy'



Churchill takes over

'You have sat too long here for any good you have been doing. Depart, I say, and let us have done with you. In the name of God, go!' These famous words—Oliver Cromwell's imperious demand to the Long Parliament—were used again in the House of Commons on May 7, 1940. This time they were addressed by Leo Amery to the Prime Minister, Neville Chamberlain, in the debate which the Opposition had demanded after the disastrous Norway campaign, the debate which was to rupture the standing of the government by sustained criticism delivered from both sides of the House. And during it Chamberlain was bitterly attacked by speakers from his own party as well as by Labour and Liberal members.

The debate continued into the second day and Chamberlain was forced into accepting what was virtually a vote of censure; Herbert Morrison declared the Opposition's intention to have the vote and the Prime Minister accepted the challenge, calling for his friends to stand by him. But those friends could not perpetuate a loyalty that was developed in a time of prosperity and peace—this was a time of war, when the administration of the country needed able representation from all parties, and even friends must change their vote to the most able leadership.

Lloyd George summed up the feeling of the House when he replied to Chamberlain's lame appeal: 'It is not a question of who are the Prime Minister's friends. It is a far bigger issue. He has appealed for sacrifice. The nation is prepared for every sacrifice as long as it has leadership, so long as the Government show clearly what they are aiming at, and so long as the nation is confident that those who are leading it are doing their best . . . I say solemnly that the Prime Minister should give an example of sacrifice, because there is nothing which can contribute more to victory in this war than that he should sacrifice the seals of office.' This demand that Chamberlain vacate the premiership was Lloyd George's last fiery speech in Parliament and no doubt served to influence quite a few members in their

voting that day.

Winston Churchill, First Lord of the Admiralty, had volunteered to wind up the debate, 'not only in loyalty to the chief . . . but also because of the exceptionally prominent part I played in the use of our inadequate forces during the forlorn attempt to succour Norway'. Churchill agreed with the criticism the Opposition had flung at the government but felt that only he, and the few who had acted against the pre-war pacifism, had the right to censure the Prime Minister; he therefore defended him and attacked the Opposition, causing an even greater uproar in the House. In the vote, over 30 Conservatives supported the Labour-Liberal Opposition, a further 60 abstained, and the government's majority of 81 was shattered.

It was now up to Neville Chamberlain to act on the temper of Parliament, and he judiciously decided that the government should become national in character with all parties involved in serving the common cause. On May 9 he summoned Churchill and Lord Halifax and the Labour Opposition leaders, Attlee and Greenwood, to Downing Street. He outlined his plan for a National Government and asked to be accepted by Labour as the coalition leader. Attlee and Greenwood would not commit themselves and hinted that the decision—which would be made at their party conference—then in session at Bournemouth—would be unfavourable. If a National Government were to be formed, Chamberlain realised now that he would have to step down and there were only two men with suitable qualifications whom he considered might hold the respect of all parties: Winston Churchill and Lord Halifax.

The following morning the political situation changed completely. The German army invaded Holland and Belgium at many points in a savage *Blitzkrieg* pattern. The startling news encouraged Chamberlain to believe that his duty was to remain at his post, but he was persuaded by his trusted friend, Sir Kingsley Wood, in the light of the rapidly developing war situation, that a National Government was needed more than ever. Accordingly Chamberlain again summoned Churchill and Halifax to Downing Street.

To Churchill this was a momentous occasion and he described the interview as one of the most important in his life. He sat tensely silent as the Prime Minister explained the situation. Chamberlain favoured Halifax and believed that Churchill's heated controversy with the Labour Party two nights before would have lost him their support. Halifax, however, believed that a peer would not be able to function satisfactorily as Prime Minister and Churchill was therefore offered the duty. He accepted—on the condition that he would have no communication with either of the Opposition parties until he had the King's Commission to form a government. Churchill wanted to be established at the head of government as leader of his party—then, as Conservative Prime Minister, he would invite Labour and Liberal into coalition.

At 6 pm, as he drove from the Admiralty along the Mall to be received by the King, Churchill expected that the news of the Cabinet crisis would have brought a crowd to the gates of Buckingham Palace. But the evening newspapers were full of the events happening across the Channel and there

was nothing in them about the imminent appointment of a new Prime Minister to bring out a curious and excited crowd.

When the King asked him to form a Government, he made no stipulation to Churchill that it should be National. In his memoirs Churchill wrote:

'I felt that my commission was in no formal way dependent upon this point. But in view of what had happened, and the conditions which had led to Mr Chamberlain's resignation, a Government of National character was obviously inherent in the situation. If I found it impossible to come to terms with the Opposition parties, I should not have been constitutionally debarred from trying to form the strongest Government possible of all who would stand by the country in the hour of peril, provided that such a Government could command a majority in the House of Commons. I told the King that I would immediately send for the leaders of the Labour and Liberal Parties, that I proposed to form a War Cabinet of five or six Ministers, and that I hoped to let him have at least five names before midnight. On this I took my leave and returned to the Admiralty.'

Within an hour of leaving the King, Churchill received the acceptance of his position from both leaders of the Opposition parties. The Labour and Liberal Parties would join the government and Churchill proposed that they should take more than a third of the places, with two seats in the War Cabinet. He already had in mind the men he wanted for particular offices—Bevin, Alexander, Morrison, and Dalton—and he planned his War Cabinet to include Lord Halifax, who would also remain Foreign Secretary. He also decided to appoint three Service Ministers, appointments which he considered vitally urgent: Eden would go to the War Office, Alexander to the Admiralty, and Sir Archibald Sinclair, leader of the Liberal Party, to the Air Ministry. Churchill would assume the office of Minister of Defence 'without however attempting to define its scope or power'. That night, Chamberlain broadcast on the radio that he had resigned and urged the support of the people to his successor. He also accepted the leadership of the House of Commons as Lord President of the Council.

So, on the day when the German army repeated, in a more thorough way, the old Schlieffen plan of the First World War and invaded the Low Countries in its sweep to the French coast, one of the few people in Britain who had been fully aware of such an eventuality became Prime Minister. After the events of this day, Churchill wrote:

'I was conscious of a profound sense of relief. At last I had the authority to give directions over the whole scene. I felt as if I were walking with destiny, and that all my past life had been but a preparation for this hour and for this trial. Ten years in the political wilderness had freed me from ordinary party antagonisms. My warnings over the last six years had been so numerous, so detailed, and were now so terribly vindicated, that no one could gainsay me. I could not be reproached either for making the war or with want of preparation for it. I thought I knew a good deal about it all, and I was sure I should not fail. Therefore, although impatient for the morning, I slept soundly and had no need for cheering dreams. Facts are better than dreams.'